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General Scientific

THE MANAGEMENT OF PRISONS FROM THE VIEWPOINT OF HUMANITY AND HEALTH.*

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A survey of the past management of prisons and the treatment of the offender discloses conditions which, in the light of present methods, are both ineffectual and inhumane. It is only in recent years that there has been an insistent demand for humane administration, and the knowledge that health of mind and body is essential for the recovery of the convict is of still later recognition. For the inhumanities of the past we are substituting a regime in which justice to the convict attains a higher end than the mere assertion of authority and the empiricism of the old prison system based solely on the deprivation of liberty is being supplanted by modern practices conceived from a radically different viewpoint. The future prison will be both a school and a hospital where criminality is studied and treated rather than a place of detention and repression, for we are realizing that individual analysis of the material for reformation is essential before treatment and final cure can be effected. We have learned that some offenders in frequent conflict with the law are but semi-responsible and eventually we shall treat them as we do the chronic insane, if we would free society from their periodic raids. We have recognized the necessity for a plan more efficient than the system that has failed, for penal institutions can be of no avail if conducted as mere places of detention or agencies for punishment. Past efforts have deprived the convict of his liberty, punished him and attempted to profit by his labor without a real understanding of the problems involved. The prisons are dealing with abnormalities, the majority of the inmates are ill, abnormal or unusual—persons handicapped by heredity, deficient in mind or in body, victims of acquired mental disturbances or disorganized by vicious habits or unnatural practices.

A real appreciation of the mental and physical char-

acteristics of the criminal has been denied most prison officials. They have not understood the material with which they labored, and that they have failed is but a natural sequence, for it has long been recognized by those who have studied the criminal that he is usually abnormal in mind or in body. He is frequently afflicted with physical deformities, syphilis, eye strain, flat feet and divers reflex disturbances and mentally he may be feeble-minded, epileptic, a borderland case or even a lunatic. Sexual perversion is not uncommon, and the number who may be considered norms represent not more than from thirty to forty per cent. of the population. These facts demonstrate the necessity of treatment rather than repressive measures.

The prison ought to be both a school and a hospital where those who have erred can be educated in hand and mind, and cured of disease or deformity, but such humane and scientific management demands high-grade executives of special fitness and ability. The political experiment has had long trial and has merited the disgrace that it has acquired. Both officials and subordinates need special training, and the state could well afford to maintain a school for their instruction, and those not showing special aptness for their work should not be encouraged to continue. Such a school, attached to one of our penal institutions, would be a practical proposition.

The ideal warden should be both a schoolmaster and a physician, for then he would be well fitted for the supervision of the methods employed to regenerate his charges. A warden so equipped would understand men, appreciate their limitations, diagnose their defects and then outline the treatment necessary for their improvement and cure, if this last be possible.

There is no more important requisite than guards and employes of intelligence, keen judgment and honesty, for without doubt every prison subordinate is an ideal citizen in the eyes of some of the inmates over whom he has supervision. His conduct will be reflected by the prisoners, and if he be rough, uncouth and a bully, we can not expect the convicts under him to conduct themselves in a gentlemanly manner. There is always grave danger of collusion between convicts and dishonest employes, and such a condition is a menace

*Read before the Society of Medical Jurisprudence, January 11, 1915.

to the management and calls for decisive action. The prisoners must have respect and confidence in the management, and their attitude may be a determining factor for success or for failure, and in view of this there should be an opportunity for an exchange of ideas between the officials and the prisoners. Exclusiveness on the part of the warden or chief executive can only lead to suspicion of him by the inmates, and he should each day come in contact with many of the prisoners. Their statements, no matter how seemingly trivial, should be listened to with dignity and respect, for trivial complaints are developed into affairs of moment by the one who may have little else to do in confinement excepting to dilate upon alleged discrimination or fancied ill-treatment. At these interviews, when there is merit in the prisoner's complaint or statement, it should be given proper consideration, for abuses can be corrected, the routine adjusted and improvements effected not only for the individual prisoner but for the whole population, if appreciative regard is had for these complaints.

The cold prison atmosphere should be changed to more nearly resemble that of a combined school and hospital, for iron bars and stone walls are of doubtful value either as a reformatory factor or as a therapeutic agency. For years we have been confining many abnormal men in an environment that is quite at variance with normal living, and have expected them to become accustomed to this without friction or protest. We should endeavor to establish, as far as possible, the same relationship in prison that exists between individuals in civil life. There is no necessity for the prison silence, sullenness or other signs indicating servitude, and for these there shall be substituted normal ways of acting, thinking and working.

The modern prison fully provides for the physical comforts of its inmates, and fresh air, good food, warm clothing and clean quarters are not only a necessity but the right of the caged man; furthermore, the cells should be equipped with modern plumbing and each cell should have at least five hundred cubic feet of air space and a system of ventilation for forced draught installed to insure healthful conditions. Clean clothes, ample light and a room free from vermin and furnished with the necessities are essential, but it is far better to have all cell equipment absolutely alike and not allow the prisoner with money to furnish his room and provoke jealousy and envy among those not so fortunate and but one to a room should be allowed except under strict selection and supervision. It might be well to eliminate the bars from the door of the cell and substitute a steel door with window and grill work. While this innovation may not alter the conduct of the prisoners nor aid the management, nevertheless we must not fail to recognize the psychology of the bars.

The law states that a sufficient quantity of wholesome food but of inferior quality shall be supplied the prisoner, yet there is no justifiable reason for the enforcement of such a provision, for the prisoner needs food of good quality well prepared and of ample variety. The State, having assumed the authority to imprison a man, should obligate itself to supply all of his reasonable needs and having done so should deny him the right to secure luxuries. All articles of clothing, cell equipment, in fact, everything necessary to fill the mental and physical wants of the prisoner, should be supplied by the authority that detains him, and nothing else should be furnished or purchased for him. In no other way can we eliminate drugs, liquors and other contrabands from the prison. Many of the difficulties and vexations that beset the wardens of our prisons are the result of the pernicious favoritism shown prisoners who have in-

fluent friends. There should be no preferred rooms, no easy jobs for ex-politicians and bankers. The convict must know that money and political favor can not change his prison status, and that justice and fairness will always be forthcoming, regardless of who he is or whence he came.

In all prison industries the first consideration must be training for future honest livelihood, for the prison must justify its existence not simply by permanently detaining the irreclaimable but by fitting its hopeful inmates for re-entry into society and industrial strife. Working the convict for ten hours a day is an error both economic and sociologic, for the temporary profit derived from his labor can never justify the neglect to train him for future honest work and right living. It is real economy and a distinct social asset to make him a self-sustaining, law-abiding citizen. Many different systems have been tried for utilizing the convict's labor, and no doubt the State Use System is the most satisfactory, both to the convict, the State and to organized labor. Convict labor is cheap, but this is no reason for wasting it, and the attempt to increase its efficiency and conserve its energies should bring industrial rewards. There must be more profits before there are any earnings for the prisoners, for the State will not draw upon its own resources for prisoners' wages, but if the convict earns a wage, why not give him the opportunity to profit by his labor. Convict earning systems are now operated successfully in many states and afford aid for those who really suffer by the prisoner's incarceration.

Health must not be sacrificed for work; men in confinement can not be kept at the pace of free workmen, and an eight-hour day can not be maintained if it interferes with other equally as important agencies for reformation. Industries and work that are injurious to health can be avoided and employment provided that will not impair their physical condition. Modern shop buildings, with plenty of air and sunlight and equipped with all the modern sanitary arrangements, are even more essential for the convict than for the free workman. Safety appliances on all dangerous machinery must be provided, and "Safety First" must be the watchword, for the mind and hand here employed are not as keen and active as in civil life and the compensation law did not include the prisoner. Watchful care is ever needed to prevent serious disabilities or fatalities.

A Farm Industrial Prison represents the most desirable plan for future development, and while the Agricultural Prison movement has many advocates, in this latitude it is impossible to keep a large force steadily employed at farming. Men may be employed during the summer months at agricultural pursuits, but it is quite necessary that other means of employment be afforded during the winter season, and this restriction applies also to road-building and conservation work. The purely agricultural colonies having large numbers of men can not be successfully conducted unless manufacturing industries of some sort are connected with them.

The restoration of health and strength is one of the duties of modern prisons, and a well-equipped hospital of ample capacity and modern construction is needed. A physician, an experienced psychologist, a dentist and such other medical assistants as are needed should compose the resident medical staff. It is impossible for the prison surgeon to attend to all the ills that come to him, and he needs the aid and advice of competent advisors, and for this purpose a consulting staff selected from the best talent available should be attached and include a surgeon, oculist, genito-urinary specialist, neurologist and an alienist.

Reliable statistics show that most prisoners need treatment; more than thirty per cent. are mentally abnormal and seventy per cent. below normal physical standards. A careful case history of each man should be made, and if possible this should be augmented by a field study of his ancestry and environment. Examinations by the specialists, too, should be made, for in no other way can we determine the necessity for intervention, and the prisoner should be urged to submit to such treatment or surgical procedure as will restore his health.

Prisoners subjected to disciplinary measures should be seen frequently, not only to insure humane treatment but to be certain that physical or mental abnormality is not the reason for infraction of rules. The physician must be supreme here and have courage to insist that his orders be obeyed, and he should be in frequent consultation with the disciplinarian and all doubtful cases that come before the latter should be examined in conjunction with the medical officer. If this course is pursued we can avoid the embarrassment of punishing epileptics, fools and lunatics in an endeavor to correct by inhumane methods that which science fails to do with her best efforts. Such an inspection will eliminate the insane from the population and also diagnose the borderland cases and remove them from the exacting routine, and similar examinations will detect the drug addicts and apprise the officials of conditions with which they may be in ignorance.

The segregation of all contagious and infectious diseases shall be effected regardless of the stigma attached to some, and there must be separate rooms, furniture, clothing, bathing and dining arrangements. Tuberculous patients should be prevented from spreading infection, and all modern measures to this end be provided and the necessity for their use thoroughly explained. Those having venereal disease should be given modern treatment and have instruction to prevent the infection of others. Personal hygiene can be taught both by individual talks and by the distribution of plainly written pamphlets.

But passing mention can be made of asexualization; this operation performed upon selected cases will produce excellent results, and its value from the eugenic viewpoint merits careful consideration.

A fruitful field, and one as yet practically undeveloped, is the individual psychic study of the prisoner. Here is the opportunity for the trained alienist to analyze and correct, if possible, the defective reasoning that has brought disaster to the convict, for patient and insistent labor may establish a normal mental state which will appreciate the rights of property, persons and society, and the individual's relationship to them all. The technical detail of this work for the alienist and psychologist will not encroach upon the legitimate field of the moral instructor.

Physically the convict is undersized; at an average age of twenty-one his physique about equals the normal female of the same age. Mental and physical development are closely related, and physical health and mental quickening both improve from systematic exercise. While the more popular games and sports afford diversion and keep the prisoners out of doors, their actual value is limited by the small number who can participate. Calisthenics or "setting up drill" in which the whole population take part each day is an ideal method, and sports for recreation and amusement should remain of secondary importance. Special classes selected by the physicians from the retarded and defective inmates will be greatly improved by free-hand exercise with

musical accompaniment. Physical culture has long merited a permanent place in the prison curriculum.

Education, physical improvement, industrial and moral training call for insistent and exacting routine, and these essential factors for success can not be dependent upon the convict's initiative. Freedom is his goal, and in the interim physical and mental comfort are his desires. He accepts with good grace or otherwise our efforts to regenerate him, and his interest in the result is oftentimes not active nor voluntary. Mental effort is distasteful to him and he will volunteer extra manual labor in order to avoid study. Success can not come if he be allowed to follow the line of least resistance. His efforts need frequent stimulus, and a kindly but steadfast and determined hand must guide him.

Discipline is just as important in a prison as in an army, for obedience and respect for authority must be fundamental in both. Undoubtedly many violations of the prison discipline are due to the unnatural environment of the inmates, for there is nothing approaching prison routine in civil life, and men can not adapt themselves to this strange environment without some hesitation and friction. The law states what shall be the punishment in prison and describes its infliction in detail; it assumes to abolish all inhumane and unusual punishment and is framed with a laudable desire to punish humanely, however, the experience of the ablest prison disciplinarians seems to be in accord that punishment alone will not reform men nor compel obedience to rules. Being merely locked up will not prevent crime nor cure the criminal and being merely punished will not prevent the incorrigible from violating the prison rules during his incarceration. Prison discipline is a manifestation to a considerable degree of the prisoner's appreciation of his executives and the esprit de corps of the convicts frequently reflects the discipline of a prison. The old system taught that repressive measures are the quintessence of discipline, but failed entirely to appreciate that cheerfulness of action and willingness to co-operate is real discipline. To obey smilingly, willingly and cheerfully is the discipline for which to strive. If the privilege of unlimited conversation is granted and at the command to cease, silence follows, this is discipline. If men are allowed hours of recreation and play and at the Recall they cease their activities and rapidly and willingly fall into line, this is discipline.

The establishment of different grades with additional privileges and the commutation of sentence for good conduct will always be a stimulus for many, and a further incentive can be had by supplying insignia indicating continuous obedience. On the other hand, clothing significant of misconduct is of doubtful value and fails as a stimulus for all but the supersensitive. The lock step, shaven head, ball and chain and other marks of dishonor have no place in humane administration. Neither the securing nor the loss of marks should be sufficient reason per se for change of grade or for parole. A system of classification or method of promotion or reduction that fails to consider the prisoner's mentality neglects a most important factor, for each convict represents a separate problem, and a thorough understanding of him without reference or comparison to any other inmate should alone determine his status.

Under modern management the number of men who are frequent violators of the regulations is quite limited and represents but a small per cent. of the population. In an institution where the spirit of the men is for co-operation, discipline presents but routine work. In others, where it is the practice to enforce obedience to the rules by severe punishment, discipline may assume tremendous proportions. In the administration of dis-

cipline we have entirely abandoned the former desire for vengeance, retribution and repression, and now strive always for prevention and reformation. Silence and discipline are no longer synonymous terms in humane prison management. Traditional practices and lack of humane and intelligent administration are still responsible for the continuance of repressive measures. The old method considered only the offense against discipline and avoided the actual issue, the offender, his responsibilities and his motives. Practically all of the persistent violators of the rules in a well-conducted institution will be found to be feeble-minded, mentally or physically abnormal, and I have yet to know of an incorrigible prisoner who could not be so classified. All mental defectives are by no means incorrigible, but all incorrigibles are mentally or physically abnormal. The defective criminal should be segregated and society protected from him, but to this end he should not be sent to prison and punished, because Nature did not use him well in the making.

Many of the so-called "incorrigibles" are caused by physical defects in prisoners who are mentally normal. A complete and thorough physical examination by a competent medical staff should detect these physical defects and pathologic conditions and remedy them, and this alone will greatly reduce the work of the disciplinarian. Reflex irritability from many sources may provoke an irascibility of temperament that will make an alleged "incorrigible" of a man who would be tractable enough were his physical defects corrected. A few difficulties that produce reflex irritability of this character are as follows: Incipient tuberculosis, defective eyesight, adenoids, obstructed nasal passages, flat feet, stricture, bad teeth and others that would only be of technical interest. First be certain that all of the physical bases of his irritability are corrected before punishing a man for incorrigibility, for an incorrigible is never a normal man. If a complete study of the incorrigible is made, he will be found to be feeble-minded of varying degree, suffering from a physical defect or from a positive psychosis, and for correction, proper diagnosis and suitable treatment are needed, not punishment.

The epileptic is a complex problem; not only he who has violent seizures but also the one who is subject to attacks that give no outward sign. This latter type may commit an assault or violate a rule and be placed in confinement, then later declare to the authorities that he does not remember committing the offense and can not understand why he is in a punishment cell. This is all very true, but the unfortunate is usually considered a fraud. Similar circumstances may surround the hysterical prisoner, for hysteria is not uncommon in prison, but co-operation between the medical staff and the disciplinarians will insure the proper disposition and treatment of these conditions.

It has long been contended that the maintenance of good discipline necessitated stern and at times even severe punitive measures. The New York State Reformatory at Elmira has for some years past shown the fallacy of the old idea, and has secured discipline of military effectiveness without the use of repressive measures. While promotion and reduction in grade and the withdrawal of special privileges are still of value, the important features are the segregation of the incorrigible defectives, the elimination of the insane, the humane understanding of the epileptic problem and the comprehensive study of the individual cases that have come before the disciplinarian. For nearly five years it has not been necessary to confine a prisoner in a dark cell or screened cell, nor has it been necessary to forcibly restrain him or to starve him by short diet. The dis-

cipline resulting from this humane and scientific system has been all that the officials could desire.

Any observing prison official knows scores of men who upon release will revert to crime. The recidivist enjoys short intervals of freedom, but spends most of his life in confinement and completes a circle of crime, arrest, conviction, imprisonment and discharge, over and over again, and each time a short sentence is imposed, for he is wise in the ways of courts and judges and is always willing to "cop a plea" for promised leniency. Our present treatment of him is futile; he needs permanent custodial care, for there is but little difference between the recidivist and the chronic lunatic; both should be well treated, but kept in permanent confinement. The optimistic contention is that every convict should always be given another opportunity to demonstrate his real worth, yet this attitude is but self-deception, and we should come to a conclusion in the case of the recidivist with the same celerity, sureness and finality that we do in the case of the lunatic.

Convict self-government is in the experimental period, and, while prisoners may be able to govern themselves and to maintain the same standard of industrial efficiency, progress in education and reformation as under skillful management, they have yet to demonstrate this ability. That restricted liberty can be allowed selected groups of convicts and that limited authority may be vested in some is by no means a recent discovery. For just what number bars and arms are necessary, we have yet to ascertain, but it is likely that such restrictions are for the minority; however, it will take some years before final judgment can be passed upon either the honor system or the still more recent self-government scheme.

The modern prison aims to restore to society a normal man, cured of his criminality, and recovery involves education of mind and hand, together with physical improvement that will prepare the convict for intellectual and industrial development; maudlin sentimentalism is not indicated in this treatment. While in many instances the prognosis of criminality is favorable there is as yet no specific, no royal road to reformation and there can be no doubt that far better results are obtained by a humane and scientific regime than by the punitive system of the past. Despite the best efforts there will always be plenty of failures and it is useless to attempt to conceal the fact that the efforts expended upon many convicts are unavailing, moreover an accurate scientific knowledge of the mental and physical limitations of many convicts would disillusionize some enthusiastic critics and bring to the modern penal institution some long deserved credit.

M. Krotoczyner (*Surg., Gyn. and Obst.*) admits that though pyelography is justly considered as of definite diagnostic value in some renal lesions (dilatation of renal pelvis and calices without functional disturbance, malposition of kidney, etc.), a correct diagnosis of the great majority of surgical kidney conditions is, nevertheless, feasible without this method. The general acceptance of strict contra-indications to pyelography is the more indicated, since it is proved that solutions, though brought into the kidney pelvis with faultless technique and without undue pressure, may penetrate into the tubules and the surrounding kidney-tissue and cause serious inflammatory lesions resulting in necrotic foci. Pyelography should be restricted to those comparatively rare cases in which the correct recognition of a renal lesion by a combination of all other exact methods of examination is impossible.

THE MODERN TREATMENT OF EPILEPSY.

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How to build suitable asylums for the reception of epileptics needing long residence is a factor of the greatest importance among the special problems which need consideration in the treatment of epileptics. But it cannot be dealt with separately, and in order to reach a satisfactory solution it behooves one to consider the therapeutic results as a whole otherwise peculiar consequences are not unlikely to occur, as the following example shows which I cite to illustrate my contention.

Prof. Herman Fischer several years ago discussed in detail the special architecture required for an asylum for epileptics. He based his conclusions upon observations made at the epileptic asylum at Wuhlgarten near Berlin. He proposed that the walls of the rooms occupied by epileptics during the day time should be padded man-high, the halls knee-high. He recommended that the floors be covered with fixed mattresses, the windows arranged like skylights in the ceilings, and stairways and doors eliminated as much as possible. Furthermore chairs and tables must be fixtures, the beds low. Prof. Fischer based his conclusions for the structural requirements of an epileptic asylum upon a study and observation of the injuries sustained by the inmates at Wuhlgarten as a result of epileptic seizures. To schematically follow the extreme principles enunciated and carry them out would entail the perpetual imprisonment of epileptic subjects in a four-cornered padded trunk-like cage in which they would also have to be fed.

Nevertheless we believe that no sensible physician, least of all Dr. Fischer himself, would be likely to uphold the padded trunk as an ideal for an epileptic asylum and even the upholstered rooms without windows and furniture might hardly find much popularity among physicians. When considering the construction of an epileptic asylum, the absurd consequences of Fischer's suggestions can only be avoided if the architectural arrangements are considered together with the therapeutic results obtained in the treatment of epilepsy. The main result we desire to achieve through our therapeutic measures is the reduction in the frequency of the seizures to a minimum; a relative reduction in the number of the injuries sustained by patients will also naturally follow, and it will therefore not be necessary to confine the patients in extremely uncomfortable surroundings. Because of the therapeutic results at present obtained in asylums for epileptics, there is no need to construct these differently from hospitals in general.

Our institution for epileptics hardly differs from any other well established, modern asylum which is destined to receive permanent patients, yet no serious injury has resulted from the seizures during the last few years among our 250 patients. During last year only two minor cutaneous wounds needed stitching although our patients work in the wood-house, in the garden and fields—of course under supervision. This result we obtained by greatly reducing the number of seizures. For example from 1899 to 1910 the yearly number of seizures amounted to 150 per patient whereas in 1911 and 1912 the number had fallen to 75 and 80 seizures respectively per patient. The results followed radical reforms which I have introduced in the treatment of all patients.

The following figures speak for themselves. We have tabulated the number of seizures of the same 27 patients who have been under treatment at our asylum

since 1900. The results which have followed the various methods of treatment are very striking. The number of the seizures were as follows:

1900.....3,381	1905.....3,903	1910.....1,637
1901.....3,771	1906.....3,816	1911.....1,141
1902.....3,438	1907.....3,283	1912.....640
1903.....4,049	1908.....2,509	1913.....718
1904.....3,576	1909.....2,257	

Under the administration of the ordinary food and the old-fashioned bromide treatment 32,745 seizures occurred yearly among the 212 patients and the 59 new admissions. Since the introduction of the sedobrol treatment 17,612 seizures were reported among the 235 patients and 151 new admissions (the admissions having trebled and the seizures of all newly admitted patients are included in the above statistics).

We quote a few illustrative examples:—

1. H. St., born 1879. History of pulmonary tuberculosis in father's family. Father died at the age of 47½ years from a tumor. Paternal brothers and sisters died at an early age. She suffered with infantile convulsions which subsequently changed into epileptic attacks. These were heralded by a painful sensation in the body and general convulsions with unconsciousness followed. Patient is now in our care for the second time. When first admitted she was 12 years of age. At that time the following attacks occurred with the ordinary diet and 5 grammes of bromide salts daily:

1891.....100	1893.....154
1892.....130	1894.....40 (during three months)

On February 4, 1895, patient was admitted for the second time to the asylum, where she has since remained uninterruptedly. The nature of the seizures had not changed; slight and more severe general tonic-clonical seizures occurred repeatedly day and night, beginning with an aura (pains in the body), violent screams, paleness, tonus-clonus, cyanosis of the face, the paroxysms being followed by sleep. Duration of the seizures, ½ to 2 minutes. Number of the seizures:

1895.....137	1902.....137	1909.....51
1896.....148	1903.....119	1910.....—
1897.....190	1904.....133	1911.....—
1898.....149	1905.....124	1912.....—
1899.....133	1906.....154	1913.....1
1900.....119	1907.....207	
1901.....145	1908.....37	

On June 24, 1907, the patient was put on a salt-poor diet without otherwise changing the treatment. Five grammes bromide medication per diem was continued. The withdrawal of the common salt caused sleepiness for several weeks, but severe bromism did not occur. All symptoms of bromism disappeared completely within one week, and the patient's condition became better than ever. Commencing with the day of the salt withdrawal the seizures ceased entirely, at first for three months, followed by months in which 8, 3, 3, 2, 2, 8 attacks occurred, then a period of 2 months elapsed without further seizures and again one month with 18 attacks. This month (June, 1908) the patient spent at her home, where the salt-poor diet was not carried out carefully. For the exacerbation in the summer of 1909 with 14 attacks, whereof 7 were very slight, we could not find any exciting cause. From December, 1909, the patient has remained free from all attacks. Since November 3, 1911, 4 sedobrol tablets per diem were administered, and from April 1 3 sedobrol tablets, and she has had no further attacks.

2. B. R., born 1879. Was a patient at the asylum from July 1, 1898 to December 31, 1910. She comes from a neurotic family; is of a feeble constitution. During childhood she was an ordinarily gifted pupil. During her 16th year, following an infection from measles, the first attacks occurred in the form of "petit mal," 4 to 5 times daily. These later on were followed by severe attacks of the type explained hereafter. The attacks were initiated by turning of the head towards the left, preceded by low screams, extensor tonus of the arm, flexor tonus of the legs, and stammering accompanied with smiles. They were followed by profound sleep. Frequency of the attacks:

1898.....149	1904.....241	1910.....—
1899.....388	1905.....252	1911.....1
1900.....261	1906.....226	1912.....—
1901.....166	1907.....152	1913.....—
1902.....364	1908.....39	
1903.....266	1909.....—	

Beginning on June 24, 1907, the patient was placed on a salt-poor diet. During the first year of the salt-poor diet an improvement of 80 per cent. set in, 97 per cent. in the second year, and since September, 1908, the patient has been free from

every disturbance, making 5 years' freedom with but one single exception. No periods of considerable duration were reported as free from attacks during the 10 years of administration of ordinary food. Sometimes the patient was spared the attacks for days, but never for weeks or months, much less for years. She then returned to her home, where she helped in the housework. In May, 1911, single seizures occurred at night after a lapse of almost 3 years. On investigation we found that despite our prohibition the patient was given food containing salt, especially in the form of soups containing too much salt. We are convinced that the cause for the recent seizures lies in the intake of common salt. The patient was re-admitted to our institution (May 19, 1911) and since that time has remained quite free from any attacks.

3. B. W., born 1870. Since 1894 she has been a patient at the institute. Epilepsy set in when she was 14 years old, without apparent cause. From her 18th year the seizures occurred almost regularly every month (menstrual type). She suffered quite often frequent attacks, 4, 6 to 8, which were followed by post-paroxysmal conditions of confusion lasting 19 days and more. The attacks were typical, tonic-clonic, but were ushered in by a motor aura in the right arm. Frequency of the attacks observed at the asylum:

1894.....25	1901.....45	1908.....13
1895.....19	1902.....42	1909.....9
1896.....38	1903.....14	1910.....—
1897.....52	1904.....21	1911.....—
1898.....23	1905.....37	1912.....—
1899.....31	1906.....58	1913.....—
1900.....33	1907.....43	

The patient exhibited the largest yearly frequency of attacks (58) in the year preceding the introduction of the salt-poor diet. This 41-year-old patient has had 800 attacks within about 23 years, and she has been treated with bromide in doses of 5 to 7½ grammes without any noticeable results. From 1894 periods of 1 to 3 months at the most have passed without seizures. Three months was the longest period which elapsed without any attacks since 1900 (August September and October, 1900).

Exactly one month after the initiation of the salt-poor diet the patient went on a vacation which she was to spend at her home. As a result she had 15 seizures followed by a hazy state which persisted for 10 days. Since then, however, no severe attacks nor hazy states have occurred. When dismissed from the asylum the patient continued to take 5 sedobrol tablets daily. She was then able to work as a domestic servant.

4. F. H., born 1871. A patient admitted to the asylum on September 1, 1891. Her father died at the age of 55 years from pulmonary tuberculosis; he was "at times" inebriate. The mother was neurotic. Patient was born healthy, but is said to have suffered with meningitis lasting three weeks within the first six months of life, and which left a paralysis of the right side. When one year old convulsions occurred in the paralyzed limbs, epileptic in character, but without any loss of consciousness. Year after year these convulsions became more intense and during puberty severe seizures were experienced with an aura, falling down, tonus-clonus, but according to the reports consciousness was not impaired. When admitted to the asylum the patient showed cerebral infantile paralysis of the right side with marked unnatural contractions and atrophies. The intelligence was undisturbed. Patient can write beautifully with the left hand. We observed slight and more severe seizures of the following type:

(1) Slight seizures: Sudden stiffening of the right hemiplegic without loss of consciousness.

(2) Severe attacks: Low screams, tonus beginning in the right hemiplegic arm, cyanosis of the face, dilated pupil, later on tonus with trembling in the left arm, incontinence of urine, decidedly disturbed consciousness. Duration of the seizures, about 20 seconds.

Frequency of the seizures:

1891.....33	1899.....100	1907.....65
1892.....64	1900.....101	1908.....109
1893.....144	1901.....86	1909.....45
1894.....157	1902.....95	1910.....53
1895.....79	1903.....188	1911.....84
1896.....158	1904.....164	1912.....50
1897.....170	1905.....96	1913.....64
1898.....178	1906.....107	

June 24, 1907: *Withdrawal of salt.* No bromism was caused. The effect was especially marked upon the more severe seizures. For example, during the first half-year of 1907 28 severe seizures occurred, whereas in the second half-year of the salt-poor diet but 3 attacks were recorded. From November 3, 1911, patient received three sedobrol tablets daily since which a continued reduction of the attacks has been noted.

5. N. N., born 1876. A patient at the asylum from November 22, 1895. The father suffered from headaches and a sister

died at the age of 7 years from a cerebral affection the result of a fall on the head. Nine brothers are healthy and intelligent; the parents are related.

When 2 years old the patient was stricken with meningitis, later on with measles and gastric fever. From childhood on she has shown lack of intellectual development, has had difficulty in learning, and a deficient memory. When 15 years old epilepsy set in with matutinal attacks on arising occurring at intervals of from five to seven months, later on of from five to seven weeks. Occasionally series of attacks were witnessed. The first seizures were of a tonic-clonic nature, without aura, accompanied with cyanosis of the face, and post-paroxysmal sleep. We observed seizures of the following type: The patient sits with fixed eyes and dilated pupils, followed by violent trembling in the arms and legs and in the jaw. When called she answers abruptly and inadequately. The patient then grows very pale, fear increases, she begins to weep and, suddenly bounding up, steps backward, calls a name repeatedly and with a scream a typical epileptic seizure follows with general convulsions and loss of consciousness. The pre-epileptic condition sometimes lasts for 20 minutes. After the seizure the patient remains confused and uneasy for quite some time, often for two hours; after a series of severe attacks delirium with visions of animals (white mice, lizards, beetles) and this occurs several times a year, the delirium always lasting several days. Frequency of the attacks:

1895: 13,	6 severe attacks	7 slight attacks
1896: 71,	37 " " "	34 " " "
1897: 140,	37 " " "	103 " " "
1898: 458,	76 " " "	382 " " "
1899: 216,	37 " " "	179 " " "
1900: 381,	45 " " "	336 " " "
1901: 667,	61 " " "	606 " " "
1902: 314,	29 " " "	285 " " "
1903: 457,	46 " " "	411 " " "
1904: 481,	48 " " "	433 " " "
1905: 649,	63 " " "	586 " " "
1906: 525,	45 " " "	480 " " "
1907: 345,	54 " " "	291 " " "
1908: 171,	14 " " "	157 " " "
1909: 131,	4 " " "	127 " " "
1910: 118,	3 " " "	115 " " "
1911: 112,	2 " " "	110 " " "
1912: 79,	0 " " "	79 " " "
1913: 77,	0 " " "	77 " " "

REVIEW: This is the case of a 35 year old woman who has had a total of about 6,800 epileptic seizures and the condition has persisted for 17 years. For 13 years bromide treatment consisting of 5, 6.2 and 7.5 grammes respectively of bromide salts gave no marked results.

Upon withdrawing the salt from the food on June 24, 1907, a reduction was obtained in the frequency especially of the severe but also of the slighter seizures. Whereas years ago the patient suffered 40 to 70 convulsive fits we observed during the 4 years of salt-poor diet a total of but 26 spasmodic seizures. Since the patient has been placed on a salt-poor diet and receives 5.0 grammes sodium bromide, the hazy states with hallucinatory delirium which previously occurred several times a year have disappeared. The improvement has since steadily increased.

At first the withdrawal of salt caused a change in the disposition of the patient which persisted for about four weeks; the patient became somewhat depressed, at times stupid and was also careless in work and walk. Upon disappearance of these slight symptoms of bromism the patient improved psychically. Since November 3, 1911, the patient receives five sedobrol tablets per diem and this has been followed by an increasing improvement.

6. A. St., born July 6, 1878. A patient at the asylum since February 27, 1888. The father was an inebriate, apparently a dipsomaniac. At the age of 36 years he died of phthisis. A brother of the patient was an epileptic and also died. A sister died from convulsions at the age of 9 months. The physical and intellectual development of the patient were satisfactory but he was classed among the less gifted pupils. He was of a quiet disposition, good-natured and affectionate. At the age of four years epilepsy had already set in first with transient unconsciousness and hiccoughing spasms. When 18 years

old, severe attacks occurred. The following table will illustrate the frequency of the attacks:

Year	1	2	3	4	5	6	7	8	9	10	11	12	Total of seizures	Average per month
1888	—	—	—	—	89	32	29	1	—	—	—	—	160	13.3
1889	2	2	2	3	1	3	2	—	2	—	—	—	18	1.5
1890	1	—	—	1	—	—	—	1	1	—	—	—	7	0.6
1891	1	—	—	—	2	—	2	—	—	—	—	—	5	0.4
1892	—	—	—	—	1	1	1	—	—	—	—	1	6	0.5
1893	1	2	4	—	3	1	3	—	2	—	—	—	17	1.4
1894	2	—	2	—	2	—	6	—	1	—	—	—	14	1.2
1895	1	1	—	1	1	1	1	2	—	1	—	—	10	0.8
1896	1	3	4	—	2	1	1	2	2	1	3	5	25	2.1
1897	1	3	3	5	6	6	4	8	5	2	4	4	51	4.3
1898	4	4	6	6	3	5	7	7	4	2	3	4	55	4.6
1899	4	5	3	7	2	10	11	13	13	8	19	14	109	9.1
1900	17	13	9	10	17	16	15	16	12	8	14	8	155	13.0
1901	8	21	10	12	13	9	17	15	17	16	12	8	158	13.2
1902	9	8	15	12	11	9	13	7	9	14	18	17	142	11.8
1903	12	11	10	13	8	11	6	7	10	8	11	11	118	9.8
1904	10	17	15	8	10	10	15	12	7	12	11	21	148	12.3
1905	10	11	13	15	10	11	16	11	11	15	11	16	150	12.5
1906	12	4	14	17	15	16	12	11	17	14	14	14	160	13.3
1907	18	12	16	19	12	13	17	9	9	14	9	14	162	13.5
1908	12	19	10	8	13	14	9	15	5	13	12	13	143	11.9
1909	18	11	11	19	16	19	10	15	12	5	9	22	166	13.8
1910	11	13	14	21	8	14	14	16	6	2	2	1	122	10.2
1911	—	1	6	10	7	9	8	3	10	8	2	1	65	5.4
1912	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1913	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1914	—	—	—	—	—	—	—	—	—	—	—	—	—	—

On initiating the salt-poor diet the seizures became rarer and since December, 1911, when the patient was given five sedobrol tablets a day, they have completely ceased.

7. F. B. The patient's mother is a victim of epilepsy. He himself has from childhood been a laggard physically, but his intellectual development was such that he went through school without difficulty. The epilepsy set in when he was 7 years of age and became more serious in his tenth year, after the patient had been knocked down by a horse and severely injured. Since May 10, 1904, the patient has been in the care of the asylum. The attacks were very intensive tonic-clonic, and since 1904 occurring in series, as is shown in the following table. In connection with one series the patient exhibited multiple ecchymoma on the face, on the eyelids, on the neck, chest and the upper part of the back. The number of the seizures is as follows:

Year	1	2	3	4	5	6	7	8	9	10	11	12	Total of seizures	Average per month
1898	—	—	—	—	—	—	—	—	—	—	—	—	18	1.5
1899	4	2	3	2	—	1	3	1	4	2	4	3	31	2.5
1900	4	3	4	3	2	3	1	3	3	4	2	4	36	3.0
1901	2	2	3	6	5	6	3	4	3	5	3	5	47	3.9
1902	3	4	5	4	4	3	5	3	4	5	3	7	50	4.1
1903	3	11	4	5	7	4	6	5	5	12	4	13	79	6.5
1904	9	5	8	8	7	10	10	6	14	11	9	15	112	9.3
1905	12	12	3	9	17	15	10	11	9	10	9	11	128	10.6
1906	7	5	9	12	6	14	8	11	8	10	10	7	107	8.9
1907	15	8	7	5	13	6	12	3	6	6	4	6	91	7.5
1908	5	8	9	8	10	5	5	6	9	6	6	1	78	6.5
1909	7	13	3	5	9	12	4	9	3	20	13	6	104	8.6
1910	7	8	7	—	6	12	7	2	13	13	4	1	80	6.6
1911	—	—	—	—	—	—	—	—	—	—	—	—	3	0.2
1912	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1913	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1914	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Since the patient has been taking four sedobrol tablets per diem no attacks have occurred.

Technique of the Salt-Poor Bromide Therapy.

The diet formerly used was that devised by Toulouse-Richet and consisted of 1,000 grammes milk, 300 grammes beef, 300 grammes potatoes, 200 grammes flour, 70 grammes (2) eggs, 50 grammes sugar, 10 grammes coffee, 40 grammes butter. It was administered as follows:

7 A. M.— $\frac{1}{4}$ liter ($\frac{1}{2}$ pint) milk;

11 A. M.—Coffee with 2 cakes prepared with eggs, flour, milk and sugar;

3 P. M.—Porridge of flour and sugar mixed with boiling milk;

5.30 P. M.—Bouillon with salt, meat cooked without salt, unsalted potatoes fried in butter; milk served as beverage in addition to the water.

This food is said to contain 2 grammes of common salt, and in addition the patient was given 2 grammes sodium bromide per diem. Later on Toulouse recommended that the salt content be not reduced below 5 grammes per diem.

At the Swiss Institute for Epileptics we were of the opinion that a diet which had to be employed over a number of years can only be of use if the method be fairly simple. It is necessary that the food common to

the country, such as bread, meat and vegetables, should be made palatable. For this reason we instituted our present method which causes little inconvenience to the kitchen and to the patients, and with it we obtain results which we already have reported elsewhere. We simplify the method by giving soups containing no salt, because ordinary soups are 0.9 to 1% solutions of salt, and by this means we deprive the patient of superfluous salt. The soups are flavored with sedobrol instead of salt, and in this way the patient receives a palatable soup containing the medication completely disguised, and furthermore the patient is unaware that he is taking a drug. Each sedobrol tablet weighs 2 grammes and contains 1.1 gramme sodium bromide, 0.1 gramme sodium chloride, extractives of vegetable albumin as spice, and fat (creatin and creatinin which are harmful to the cortex are contained in the tablets in so small quantities that they are not worth consideration). All other foods are but slightly salted, but the salt is never completely withdrawn as we found from experience that epileptics can tolerate a salt contents of 5 to 10 grammes daily and that success is based probably more upon the constancy of the bromide and chloride administration and not upon the extensive deprivation of chloride.

In carrying out an effective bromide treatment it is necessary to divide the epileptics into two large groups, i. e.,

(a) Those physically strong and psychically almost normal.

(b) Those weak-minded and severely demented.

(a) The technique of the bromide treatment employed in the physically strong and psychically more or less normal is as follows: We begin by administering one sedobrol tablet, equivalent to 1.0 gramme sodium bromide, at noon or evenings before meals in a saltless soup, or dissolved in 1 to 2 deciliters of boiling water as bouillon sometimes with the addition of an egg. All other foods continue to be served as usual. We allow mainly bread, vegetables, little meat, as is customary in private homes; we, however, forbid cheese, ham, very spiced sausages, etc. One, two or more weeks afterwards, according to the severity of the indication, we increase the dose to 2 sedobrol tablets without altering the diet, administering them preferably one at noon and one in the evening, in the saltless soup or as bouillon. If two tablets prove insufficient we increase the dose still further to three tablets, giving one at noon and two in the evening, and continue the latter dose for a considerable period of time. In the milder cases this dosage when administered daily without interruption will suffice to inhibit the seizures for months, and even for years. Women must be impressed with the necessity for not interrupting the medication during menstruation because that period especially predisposes to seizures. If the patients are liable to attacks on arising we occasionally prescribe one tablet as a bouillon before breakfast. In very severe cases in which the seizures occur weekly, or even daily, we increased the dosage to four or five tablets within a few months, two tablets at noon, two and even three tablets in the evening, or one before breakfast and one or two tablets as bouillon in the course of the morning. The complete withdrawal of salt, as has already been mentioned, we limit to the soups, reducing the salt content of the rest of the food only in severe cases by not adding salt to it in the kitchen.

Extra Directions: Patients with attacks of the characteristic menstrual type are given one additional tablet the day previous to the onset, and during the

menstrual flow, and 2 to 3 days after menstruation has ceased. Furthermore patients who have retired late in the evening (which however is strictly prohibited as a rule) are given one tablet in addition, and likewise patients who are specially permitted to go on a trip. It is furthermore advisable to familiarize the patients and their relatives with the probability that single seizures may still occur at the beginning of the treatment. My reason for doing so is that I prefer to commence the treatment with a minimal dose of the medication and increase it if insufficient, if the seizures still occur. The patient must be told over and over again that there is no remedy which could remove the seizures all at once, improvement is brought about but gradually. The patients must be instructed that the treatment will have to be continued for years, and that a treatment of weeks or months only will be useless and often injurious.

(b) *Method for the treatment of the feeble-minded or severely demented epileptics.* These inveterate cases require specially attentive treatment. In these cases there is nothing more pernicious than to suddenly withdraw common salt and to administer at once the largest possible doses of bromide. A rather long period free from attacks may thus, of course, be obtained but in these cases we court danger because when all motoric attacks are suppressed other conditions are induced, for instance, states of excitement and confusion, which are more injurious to the patients and their surroundings than are the purely spasmodic seizures. If it be desired to introduce a medicinal treatment of the demented or psychotic epileptics we must proceed more cautiously than in mentally balanced epileptics. In the former common salt must not be withdrawn to too great an extent and the bromide must be very cautiously introduced. Very often we begin with but half a tablet daily, administering but one-half or one tablet for several months, increasing subsequently to two, three or more tablets. Whenever states of excitement or confusion are manifested we do not hesitate to gradually reduce the dosage, or we administer small doses of common salt, 2 to 5 grammes, eventually increasing, per diem, the quantity added to the food. Afterwards when the condition is corrected in these patients they can be treated with a fixed dosage, and we have quite frequently observed that even in these severe cases the seizures become less frequent and less intense, and that the series of attacks disappear. All these severe cases require daily control especially at the beginning of the treatment, and for this reason they should be treated in special asylums for epileptics.

In more severe cases in which five, or even six sedobrol tablets do not suffice to check the seizures, we combine the sedobrol treatment with chloral-hydrate. We administer 0.5 to 1 gramme chloral-hydrate in single doses at bed-time. In a great number of cases the nightly seizures and the seizures in general are thereby inhibited. Patients inclined to a succession of seizures are administered 1.0 to 1.2 gramme chloral-hydrate per os or per clyster, immediately after the first seizure, and in most cases it is possible thus to reduce the number of attacks.

Bromism.—The patients undergo a slow alteration in their whole nature as shown in their behavior carriage, alteration in walk, disturbed speech and writing. In the beginning of bromism the condition does not appear to be much altered. The patients are somewhat tired and exhausted and the weariness slowly increases. They feel sleepy during the day and lose all interest in their work, or perform it perfunctorily and

inaccurately or entirely wrong. A state of thoughtlessness follows. They become depressed and weak for no reason, or they are irritated, less happy and less cheerful. Their walk becomes heavy, hesitating and gives the impression of inebriety. Their writing moreover changes greatly and anyone observing the daily writings of a patient who suffers from the effects of bromide will, after some experience, be able to diagnose the beginning of bromism and the actual bromism itself from the disturbances shown in the writing. This disturbance may advance to illegibility. Very frequently syllables or whole words are omitted and the patient forgets letters and word signs. Speech becomes perceptibly low, monotonous and indistinct. In severe cases of bromism we noted double vision, disturbances of sight and hearing.

There is absolutely no necessity for bromism to occur in any patient, especially if treated carefully. Physically weak, anemic persons are most frequently subject to bromism. It is impossible to define the dosage which induces bromism because of the great individual variations. We actually observed bromism only when the salt was withdrawn to a very great extent. The treatment is simple, and I would like to emphasize that bromism does not warrant the sudden and permanent cessation of the bromide treatment because patients who have overcome bromism will afterwards be permanently freed from seizures or at least greatly improved.

If slight symptoms of bromism occur we quietly wait a few weeks and if they do not then disappear we slowly reduce the dosage of bromide by one, or two, grammes. Should this be insufficient, we then add one to five grammes of common salt to the food for a few days or weeks. The symptoms of bromism will then disappear promptly in most cases. It is only in very rare and severe cases of bromism that we interrupt the bromide treatment for one or several days, but never permanently. During this reduction of the bromide and the withdrawal of the salt we must always be on guard, because both induce attacks. When we are compelled to administer large doses of common salt we occasionally also administer 1 to 1.5 gramme chloral-hydrate evenings.

Skin affections due to bromism have a special place in bromide therapy. The simple bromide acne is favorably controlled in all patients with arsenic. We administer Fowler's solution, two, six to eight drops, once or twice daily after meals and carry out the arsenic treatment over months and years. Apart from pigmentation of the skin in places where pressure was exerted and especially in persons of dark complexion (arsenic melanosis), we did not observe other complications. Bromide ulcerations we treat with applications of common salt or with mercurial salve, and internally we give also arsenic. A rarer skin affection caused by bromide is bromoderma nodosum, which resembles erythema and which likewise disappears promptly upon the administration of arsenic.

To prevent bromide stomatitis which so frequently occurs in persons who are taking bromide we recommend the daily use of the following mouth-wash:

Potass. Permang.....	1.0
Sod. chlorat.....	50.0
Aquam ad.....	1000.0

Sig. One teaspoonful in one glass of water as mouth-wash.

A brief resume of the results of our bromide method shows that since the introduction of sedobrol in November, 1911, 25.3 per cent. of the patients were freed from the seizures, in 48.7 per cent. a remarkable improvement was obtained, in 20.1 per cent. the condition

remained about the same and in but 5.8 per cent. was the number of the seizures increased. These latter cases are for the greater part patients with organic cerebral degeneration, or adolescent epileptics with degenerative features.

The first effect of the bromide (and it cannot be often enough repeated that this does not necessarily occur during the first weeks of the treatment in all cases) is generally shown by a reduction of the frequency as well as of the intensity of the motor seizures. Patients who previously had attacks accompanied with unconsciousness lasting for a considerable time, violent convulsions, cyanosis, sometimes ecchymosis and *who formerly not infrequently were injured by falling, exhibit now but slight, not dangerous attacks.* For years past we have not observed attacks with subcutaneous effusion of blood, or effusion into the mucous membrane, among our asylum patients, whereas this occurred quite often before. A rational treatment seems furthermore to insure the patients against series of attacks and against the much-feared status epilepticus, at all events, *no status epilepticus has occurred since 1907 among our asylum patients who were treated by this method.*

Restless, excited and confused conditions are now the exception and therefore our isolation rooms are used much less frequently than in years gone by. Quite a considerable number of these patients are now able to work who heretofore were unable to do so.

The many epileptics who are now free from attacks or in whom the seizures occur but seldom compose the main stock of our able-bodied people who are willing to work so that we can obtain new occupations for our patients. While the more demented units are occupied with picking and assorting silk, those whose condition is more favorable take part in the work in the wood-house, in the garden, the fields, the locksmith's or carpenter's shops, in the carpet industry, etc. Appropriate occupation considerably improves the physical condition of such patients. They become more satisfied with their fate, are less irritable and more genial with their fellow-patients.

Our method is being carried out successfully not only at the institution but also among our out-patients. We treat from 300 to 400 epileptics who live in perfect freedom and follow their profession, partly aiding to cover their expenses of living. The administration of sedobrol is extremely simple and can be easily carried out in the home. The salt is withdrawn all at once and the medication is administered unknown to the patient. With practically no exception our regime has been carried out over a long period of time without ill effects, and, what is more, the patients considered it a blessing.

Detachment of Retina.

A case of double detachment of the retina in a telegraph operator suffering also from nephritis is reported by L. W. Jones, Rochester, N. Y. (*J. A. M. A.*, Jan. 23). The patient had had albuminuric retinitis, which is not uncommon in nephritis, but detachment of the retina from this cause seems to be rare, and Jones has not been able to find in conversation with local oculists of large experience, any history of a similar case. Roemer mentions its possibility, and Weeks reports a similar case.

The presence or absence of hydrochloric acid in the stomach can be ascertained by inserting a piece of Congo paper in the eye of the stomach tube, which is passed down the oesophagus and then withdrawn.

DO PROFESSIONAL ETHICS REQUIRE A PHYSICIAN TO DISCLOSE TO HIS PATIENT AN UNFAVORABLE PROGNOSIS.*

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New York.

There is a fundamental difference in the obligation of a lawyer in dealing with a client and of a physician in dealing with a patient, in expressing an opinion in regard to the prospects of success of a litigation in the one case or of a cure in the other. William Allen Butler, quondam President of the Bar Association, in a lecture delivered in 1871 before the Law School of the University of the City of New York, points out the difference to which I have referred in the following language:

"Jeremy Taylor lays it down as a rule that 'advocates must deal plainly with their clients, and tell them the true state of their cases.' This is a sound rule. Physicians may hesitate to tell their patients the truth, for fear of a fatal shock, but the truth told to a client never kills him, however much it may disagree with him. Many a client would be saved time, temper and peace of mind, money and reputation were he advised at the beginning, what he so often discovers at the end of a lawsuit, that he has no defense to a debt which he owes, or that he has no remedy for the wrong which he seeks to redress."

But it is not merely the danger of "fatal shock" that should restrain a physician in many cases from disclosing the truth to his patient, but the almost certainty that such a disclosure will be the greatest obstacle to a cure. A physician has no more right, by blurring out the truth to a patient, to handicap his own efforts at a cure or alleviation of the disease, than a lawyer has to sacrifice his client's cause by constituting himself judge and jury and prejudging the case in advance and on the strength of it dismiss his client.

Law is in its last analysis not much more of an exact science than medicine. The determination of legal right or wrong in the one profession is in most cases hedged in with almost as much of an element of uncertainty as the diagnosis and certainty as the prognosis of a medical case. If both law and medicine are properly classed as sciences in theory, they are in their practice almost equally empirical and the conclusions drawn by lawyers and physicians in the cases presented to them are almost always mere matter of opinion, which cannot be positively determined in advance to be either sound or otherwise. Experience teaches quite the contrary in the final outcome of both law and medical cases. If the lawyer has no right to play the role of judge and jury, so the physician has no right to play the role of nature which reverses the opinion of the physician more frequently even than does the court of last resort the opinion of the lawyer. Every physician knows from his own experience how true this is. Let one example in regard to this point suffice for this paper. One of the most prominent physicians who among other honors was elected a few years ago President of the most important medical association in the country, was called into consultation to see a patient, who I believe had kidney trouble or gall stones; the patient was pulseless and in apparently dying condition. The consultant made his prognosis accordingly, telling the relatives, that the patient could not recover. Some time later he heard that the patient had entirely recovered and was perfectly well. He was never forgiven for his mistake and vowed never again to give such an unfavorable prognosis.

* Read at the Second Annual Meeting of the American Association of Medical Jurisprudence.

It is therefore not a choice between unqualified truth or untruth that faces either profession as a strictly ethical question, that must be determined in advance, in regard to their disclosing or not disclosing the probabilities of the cases, respectively to their clients or patients, but rather a choice of expediency, with the difference, that with reference to a client, as well put by Mr. Butler in my citation from one of his lectures, in an almost absolutely clear case, the lawyer should in conscience be entirely frank toward his client, while, to my view, the physician should exercise exactly the opposite rule and dissemble for the good of his patient, as a contrary course would, in all serious cases, practically annihilate his own attempts to cure through the accepted methods of medical practice.

No doubt innumerable examples might be adduced in support of the view indicted by me that the epigrammatic statement of Cicero, "*Nihil est veritatis luce dulcius*" (nothing is more delightful than the light of truth) does not apply to the relation of physician to patient but that, on the contrary, a slavish adherence to such a sentiment often results in the most disastrous consequences to the patient. By way of illustration let one case which has come under my own observation during the past four years suffice: In the spring of 1910 a young lady, slight of figure and of a highly nervous temperament, was stricken with tuberculosis. The accepted methods of treatment were applied in her case, including more especially the so-called fresh air cure, with gratifying results and an apparent gradual improvement until about January, 1912, when, on the recommendation of several physicians and in compliance with her own strong desire, she was sent to Asheville, N. C., in the expectation that a stay there would finally arrest the disease. She arrived there with high hopes of a speedy recovery and a firm determination to fight on bravely, as she had done previous to that time, and strictly to follow the directions of her physician. That physician was a specialist in the treatment of tuberculosis, of great reputation and an author of many standard books and pamphlets on the subject.

I will narrate her experiences there in her own words as nearly as possible: Upon completing the first examination the doctor said to her: "Now you have it! Next thing is to get rid of it, but in my opinion you never will! Your heart is irregular and your nerves are 'bum'—and with this sickness the heart ought to be strong and nerves the same." During her stay in Asheville she was examined at intervals about five times by this physician and at one or the other of these examinations, following the one referred to, some of her experiences were as follows: On one occasion, she went to his office for a tuberculin injection after he had weighed her a day or two before and he now weighed her again and then said: "You have lost two and a half pounds. My! but you are a 'bum' gainer." On another occasion he offered to take her home in his automobile as it was raining and while she was talking to him about sleeping out, he turned to her and said: "See that house with the sleeping-out porch on the second floor? Well a patient of mine lived there and after I had examined him I told him that he could not expect to be cured, that a tobacco heart and his general condition stood against him and later on that man took carbolic acid and jumped from that porch to the stone yard and fractured his skull, poor devil!" On the last examination before she left Asheville, having derived no benefit whatsoever from her stay down there but, on the contrary, having grown steadily worse, she begged the doctor not to frighten her again, as he

was accustomed to do, on the plea that she was especially nervous that day, having just gone through an operation on her nose and also only recovered from an attack of pleurisy, his first words when he started in to examine her were: "Golly! girl, but you are chuck full of pleurisy! Where in the devil is your heart? My, it is all out of place." He then drew a blue line upon her chest and measured it and continued: "My, it is seven inches out of place and is beating like the devil, over 150 a minute! You're a nervous girl; it is too bad!" Whereupon the patient, about ready to faint, grasped the doctor's arm and burst into tears and said: "Please say no more, doctor, but write it home to my people, as I cannot stand it any longer; you make me feel like ending my life," to which he answered: "Well, my dear, I always tell my patients the truth." After that interview she herself telegraphed to her people to take her home at once or she would go there on a stretcher, as she could neither sleep, eat nor retain her food since that last examination. Her wish was complied with and she was taken back to her home in the North in a condition that cannot be described otherwise than that she was a complete nervous wreck, with the chances of recovery immeasurably less than before she left for Asheville, and in so hysterical a condition that the mere mention of her Asheville doctor's name would bring on a paroxysm of coughing and all the symptoms which had almost disappeared before she came in contact with him.

To the foregoing I may add that the person who brought this young lady back from Asheville, while down there stopped for a few days with her at the sanatorium to which the doctor in question sent what he called his "milder cases." This gentleman observed the condition of all the patients at that sanatorium very closely during his stay there and confirms fully what the young lady said and he maintains that all the patients were in constant dread of what the doctor down there would say to them on the days set for their periodical examinations. They looked upon a visit to him to be examined, as an ordeal, and there was a general panic among them when the dreaded day arrived. The spirit of despondency and on the other hand of recklessness in talking about their ailments among each other reflected the tone of the remarks indulged in by himself toward his patients. Thus, for example, the patients at this sanatorium or boarding house called the sputum boxes "music boxes" and when the young lady in question asked them what they meant with that, she was told that every time that she coughed and expectorated into one of them it played the hymn "Nearer My God to Thee!"

Now, there is no question about it that this man was a "truthful James" and honestly expressed his opinion in emphatic, though ungentlemanly, language. There is also no doubt that he is a man of great experience and profound learning in his specialty. But that he is a brute in his practice and does more harm than good to his patients and that no defense of professional ethics requiring him to disclose the truth to his patients, can excuse such conduct, appears to me to be beyond all argument.

Physicians may say what they will about Christian Science healing, but fad though this may be, it seems to me that the chances are that in a case such as I have narrated, nature, assisted with sanitary living and more especially with the psychological treatment characteristic of that so-called religion, is a thousand times more likely to alleviate the disease or even effect a

cure, than when hampered or antagonized by such methods as I have described.

To substantiate this I may say, in the way of supplementing the story I have told you, that it took about two years to get this young lady back to the condition in which she was before her expedition to North Carolina and that after the expiration of these two years under the treatment of a physician who, while also adhering somewhat to the "truthful James" canon of medical ethics, treats his patient with gentleness and consideration and inspires her with the hope of complete recovery—she has gained steadily, has been almost entirely freed from all the dreaded symptoms of this dreadful disease and is really, as I have been assured by him in all earnestness, near the goal that the ravages of the disease will be finally checked.

Why then, I would ask, should the medical profession, in the face of such a case and a thousand like it that could with little trouble be ascertained, persist in feeling bound by professional ethics to disclose to their patients an unfavorable prognosis. I cannot explain it except on the theory that they are hide-bound in the traditional misconception that the admonition of veracity must be followed in all cases and knows no variation or exception. How mistaken they are in this view may be gathered from the thoughts of some of the greatest thinkers, such as for example Jeremy Bentham, who says:

"Mendacity is not only permitted, but in some cases properly permitted, by the moral sanction. That cases exist in which a departure from the truth is, and ought to be, either prescribed, or at least allowed, by the moral or popular sanction considered in its true and largest sense, is out of dispute. * * * In some cases, departure from the truth is prescribed by the moral sanction as a duty. Such are all those in which mischief to another would be the certain or probable effect of verity, while from falsity no evil at all, or at least no equal evil will, with equal probability, be the result; as, if a madman or assassin, with a naked weapon in his hand, asks whether his intended victim be not there, naming the place where he actually is. To this same head may belong falsehoods of humanity or beneficence; as when a physician, to save pain of mind, gives hopes which he does not entertain himself."

In a quaint work entitled "Man and Law," by Robert B. Warden, the author in saying that "Blackstone well expresses the forensic value and esteem of precedent, of custom, of established rules and maxims," continues as follows:

"Some forensic thinkers croak whenever and however precedent is set aside. Such thinkers are alarmed whenever anyone presumes to ask the reason of a rule, with reference to the inquiry warranted by legal maxims, whether that reason still continues to exist."

He refers to the legal maxim:

"Cessante ratione, cessat ipsa lex" ("When the reason of a rule shall cease, the rule itself shall cease"), and I would apply the reasoning of that writer, *mutatis mutandis* to the subject of the present inquiry, that in the light of present day pathology many rules of professional ethics of a former generation have become obsolete, because the reasons formerly entertained for their observance are no longer tenable.

To come down to the present day, in an interesting little volume entitled "Justice and the Modern Law," by Everett V. Abbot, published in 1913, the writer says:

"There is no universal obligation to tell the truth. That this is a sound conclusion follows clearly from the fact that the duty to tell the truth on any particular occasion, necessarily involves a reciprocal right in somebody to have the truth told him on that occasion, and there are many occasions upon which nobody has any such right."

On principle and on authority therefore I can find no justification in the inflexible rule of many physicians to disclose "the truth, the whole truth and nothing but

the truth" to their patients on each and every occasion, regardless of the consequences. Such a code of pseudo ethics I regard quite as immoral as one that would inculcate such a doctrine as an inflexible principle that falsehood is a virtue and truth-telling a vice.

In conclusion I desire to submit to you, as sustaining the views which I have here briefly expressed, the following quotation from John Stuart Mill in his "System of Logic," Book VI, Chapter XI:

"In all branches of practical business there are cases in which an individual is bound to conform his practice to a pre-established rule, while there are others in which it is part of his task to find or construct the rule by which he is to govern his conduct * * * we will suppose, in contrast with the situation of a judge, the position of a legislator. As the judge has laws for his guidance, so the legislator has rules and maxims of policy; but it would be a manifest error to suppose that the legislator is bound by these maxims in the same manner as the judge is bound by the laws, and that all he has to do is to argue down from them to the particular case, as the judge does from the laws. The legislator is bound to take into consideration the reason or grounds of the maxim; the judge has nothing to do with those of the law, except so far as a consideration of them may throw light upon the intention of the law-maker, where his words have left it doubtful. To the judge, the rule, once positively ascertained, is final; but the legislator, or other practitioner, who goes by rules rather than by their reasons, like the old-fashioned German tacticians who were vanquished by Napoleon, or the physician who preferred that his patients should die by rule rather than recover contrary to it, is rightly judged to be a mere pedant, and the slave of his formulas."

A REVIEW OF THE NEWER KNOWLEDGE OF SYPHILIS AND ITS TREATMENT.

PHILIP M. SCHAFFNER, M.D.

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During the past ten to twelve years our knowledge of syphilis has advanced to a marked degree; many of the old theories have been proven incorrect and to-day we are able to diagnose and treat the disease in a more satisfactory manner.

In 1903 Metchnikoff succeeded in inoculating syphilitic material into chimpanzees and causing syphilis, which could in turn be transferred to the lower type of monkeys; in 1905 Schaudin and Hoffmann discovered the *spirochæta pallida*, the causative agent of syphilis, and in 1906 the Wassermann reaction was reported by Wassermann, Neisser and Bruck. These three discoveries, together with our clinical knowledge, has placed the diagnosis of syphilis on a firm foundation.

In acquired syphilis the wound of entrance is the chancre and exhibits certain characteristics due to tissue changes. The living *spirochæta pallida* can be demonstrated in the serum obtained from the chancre, with a dark field illumination microscope. They can also be demonstrated by the India ink method; the field stains dark and shows the *spirochæta* by the clear space they occupy.

It is not necessary for the *spirochæta* to penetrate deeply to cause an infection, entrance into the deep epithelial and minute lymph spaces being sufficient; in fact we now know by experimentation that the *spirochæta* are carried along in the lymph to the thoracic duct and then for the first time enter the blood circulation and are disseminated throughout the entire body. After a time they disappear from the blood and lodge in the various organs of the body. This accounts for

the relapses which occur in uncured cases. Their presence causes tissue changes; in the skin we see the erythema, papule and pustule, but they may lie dormant until some irritation brings them into activity, as shown in the Herxheimer reaction. This can be produced by an injection of mercury or salvarsan and causes a reddening of the old macules and may also show new areas of infection which were dormant. Alopecia is undoubtedly a form of local infection causing hair destruction.

A person who has had syphilis can again acquire it, and further more, he can be re-infected before he has recovered from his first attack.

The most dangerous condition of the secondary and tertiary periods are the lesions of the brain and spinal cord. These are, like all other lesions, due to the implantation of the spirochæta. This fact has been demonstrated recently by Noguchi, in paresis and tabes, and in the cerebro-spinal fluid. Ballenger of Atlanta, and Farbach of Louisville, claim that there are various strains of the spirochæta, some having a tendency to cause brain and spinal lesions and others that attack only the bone and viscera. They observe that the negro very rarely suffers from syphilis of the nerve centers.

All the conditions called para-syphilitic were formerly supposed to be an aftermath, but to-day we know they are due to the presence of spirochæta.

Our opinions regarding hereditary syphilis have undergone changes due to the investigations of Matzenauer, Buschke, Uhlenhuth, Malzer and Finger. Their investigations show that there can be no hereditary syphilis without syphilis in the mother; therefore the incorrectness of "Profeta's law of immunity" and "Colles' law."

The Wassermann test determines the presence or absence of syphilitic antibodies in a suspected blood serum. In this climate, practically speaking, we have no disease other than syphilis, which will give a positive reaction. So it can be safely stated that a positive Wassermann means syphilis; a negative report does not always mean "no syphilis" as there may be latent foci of spirochæta in the body which may be causing only a minute amount of reacting forming substances. These are the ones which react positively four or five days following an injection of mercury or salvarsan. The Wassermann test does not become of any value until about six weeks following infection, or in other words, directly before or at the time the secondary symptoms appear.

In the treatment of syphilis the object in view is to destroy the spirochæta and for this purpose we use salvarsan and mercury; iodide of potash is applicable only to the later stages as it does not destroy the virus; its only action is to cause absorption of the syphilitic tissue.

Each patient must be individualized and receive treatment as quickly as possible after the diagnosis has been made. The old rule, "to wait until the secondary symptoms appear" is no longer tolerated. The amount of salvarsan to be used depends on the age, constitution and sex of the patient. There are no contraindications for its use but certain conditions call for extreme care; heart lesions, aneurysm, advanced kidney disease and brain syphilis are the ones to be feared and in such cases a very small dose should be given and repeated often. For the strong, robust man we can safely use from 0.4 gm to 0.6 gm. and if well tolerated the amount may be increased. For the female the dose is always slightly smaller.

Salvarsan should only be given intravenously and under the strictest antiseptic precautions. The water must be *freshly* distilled and sterilized, and made use of within three hours after it has left the still. After the salvarsan solution has been prepared it must be used at once as it oxidizes readily. The injections can be given at home or in the physician's office but the patient must be kept in a recumbent posture for several hours following, before he is allowed to go about.

Mercury should be used in combination with salvarsan treatment and is best given intramuscularly in the gluteal muscles. It may be used following an intensive course of salvarsan or given five to six days after each salvarsan treatment. After the last intravenous injection at least twenty mercury injections should be given at the rate of one per week. The preparation I prefer is a 10 per cent. solution of salicylate of mercury in olive oil and made as follows:

R Hydrarg. Salicylate	gr. 50
Lanolin	3ss
Olive Oil (pure) q. s.	ad 3i

This makes a solution each minim of which contains gr 1/10 of the mercury; the dose varies from M. v to M. xx, the object being to give the largest amount possible without causing salivation.

Iodide of potash is useful in the late secondary and tertiary conditions to hasten absorption of syphilitic tissue and should be given three times a day in gradually increasing doses, starting with M. x of the saturated solution; this is given, never before or after meals, but at a time when the stomach is empty and will remain so for a few hours.

Neosalvarsan is a later product similar to salvarsan, neutral in reaction but somewhat weaker in strength, 0.9 gm. being equivalent to 0.6 gm. of salvarsan. It is eliminated more rapidly from the body and its results have not been as satisfactory. In a recent article published by U. S. government medical officers, they state that in their experiences one injection of salvarsan has been equal to four of neosalvarsan, in clinical results.

Discussions on the subject of syphilis of the nervous system and dealing chiefly with tabes dorsalis and the use of salvarsanized serum, have shown remarkably good results, but as this form of treatment is comparatively new, it is impossible to state anything definite, except to say that the future treatment of this condition will be along this line, and is to be advised where the ordinary treatment fails to give the results anticipated.

In brief, the treatment of syphilis should be, salvarsan in combination with mercury, plus iodide of potash where there are old syphilitic deposits to be absorbed.

The question of what may be considered a cure arises.

The consensus of opinion is, that after a thorough course of treatment as previously outlined, a period of three months should elapse before a Wassermann test is made, and if negative they should be repeated every three months until one year has passed from the time of last treatment; if all Wassermann's have been negative to syphilis, the patient may be considered cured; if any of these tests show a plus Wassermann it is proof that there are still some spirochæta present in the body and will therefore necessitate another course of treatment as in the very beginning.

849 Park Place.

Pain in the loin and hematuria cause suspicion of the existence of stone in the kidney.

ARE SPIRIT AND DRUG NEUROSES INCREASING IN THE MEDICAL PROFESSION?

T. D. CROTHERS, M.D.
Hartford, Conn.

From various sources, some of which are reliable, there come reports of increasing numbers of physicians under treatment for spirit and drug neuroses. The question is asked, is there a greater prevalence of these maladies among medical men now, than formerly? We all recognize the fact that the use of spirits as a beverage is diminishing, and that more physicians are total abstainers (noted at society meetings and banquets) than ever before.

The old-time drinking clergyman has disappeared and the lawyer and other professional men who were supposed to need stimulants to keep them strong, have passed away. Is it possible that the medical profession are an exception to these changes?

One author is very emphatic in affirming that medical men to-day are in greater danger than ever, owing to the stress and strain, and competition of professional life. He claims they turn to drugs and spirits for relief more readily than ever. I have noted the fact that a large number of professional men under my care have received very faulty medical training concerning spirits and drugs. Many of the leading teachers of therapeutics still dwell upon the stimulant value of alcohol, and the good effects of opium and its alkaloids, cocain and other narcotic drugs, and give little or no prominence to the danger from their use, assuming that the student can determine this without any special caution.

In one of the colleges for many years, a teacher of therapeutics gave most glowing lectures on the good effects of opium, cocain, and some of the coal tar derivatives. He advised students to experiment on themselves, and thus recognize the actual value and power of these drugs. Years afterwards some examinations showed that every class which graduated under his teaching developed a number of spirit and drug takers. Finally the professor died from an over-dose of morphia, and the fact became apparent, that he had been a secret drug taker for many years.

Another professor of considerable eminence, still teaching, urges alcohol as a safe tonic and opium and cocain as most valuable drugs, with little or no mention of the dangers from their indiscreet use. In all probability this man is training spirit and drug takers among his students.

Fortunately, such teachers are not common, but the average college teacher is afraid to mention to any great length the dangers from spirits and drugs, for fear he will be considered a reformer, and hence he deals with the matter in a very chary, conservative way. This is evidently a source from which not a few persons have been permanently injured.

The good effects of the drug have been very prominently impressed, while the dangers have been scarcely mentioned. It not infrequently happens that a young physician gives spirits or narcotic drugs and is profoundly impressed with the apparent good effects which seem to come from their use. This is repeated, and he is more than ever convinced of their value, and the ill effects are explained away as insignificant.

He is unable to discriminate judiciously, hence uses them on himself from time to time, without the slightest fear. Later he becomes a drug addict or spirit taker, all the time believing that he has the power to stop at any moment.

There are two conditions which seem to favor this addiction among physicians. One is, where great success follows in early practice and the physician is very ambitious to do all the work possible. He reasons here that the stimulation of alcohol will give him new force and power for the present, and the narcotism of drugs will bring sleep and rest beyond the efforts of nature. He feels justified in using drugs for these effects and reasons that what he does for his patients, he can do for himself. Later he awakens to the fact that he cannot get along without some supposed stimulant or narcotic, and even then the delusion that it is the result of over exertion, which will pass away with improved conditions, clings to him very tenaciously. Later he becomes an addict, and the remainder of his life is a continuous struggle and failure.

Another condition is this: the difficulties that a young practitioner finds in securing a reputation and practice are followed by discouragements and gloom, and for this spirits and drugs are given to buoy them over, and cause them to sleep, and give them new courage and faith. Later when practice comes, they turn to these drugs for the relief which they had experienced before, always confident that they can stop at will. Later when it seems necessary to abstain, they find it very difficult or impossible. Like others they are filled with a delusion, that this is the result of over-work and other physical conditions, and hence become pronounced drug takers.

Another condition has a psychical cause, principally contagion and association with those who use spirits and who extol their value for all sorts of conditions. They soon adopt such theories and put them in practice and become themselves victims. It has been noted that some popular teacher in medical meetings may read a paper giving some very graphic experiences with spirit and narcotic drugs, and the influence of such a paper will be seen long after in the efforts of men to reach the same conclusions that the author has, particularly on themselves.

It is not uncommon for physicians to state that on the advice and teaching of some man, either personally or through his paper, they have begun using these drugs and later were not able to give them up. Beyond this there are many causes to which physicians, like others, are subject. This includes traumatism of all kinds, infections, both direct and indirect, and all the vast range of shocks, strains and drains that call for relief and this is most easily secured from spirits and drugs.

From my experience covering a period of forty years, I have found an increasing number of medical men addicted to these drugs, the causes of course are very complex, and often depend on individual weakness and inherited defects.

The treatment presents many difficulties and probably is not so often successful as in that of laymen. One of the reasons is, the delusional confidence in ability to judge and determine the effects of causes and the tremendous personal bias that every medical man has regarding his own condition and how it should be treated.

Occasionally some man will become thoroughly alarmed and give up this delusional egoism and is successful in securing complete restoration. Others will recover temporarily and relapse at intervals during a life time. Not infrequently a man gives up his professional work and thus secures an immunity which could not come otherwise.

The advent of quick cures, attracted a large number of this class who accepted the pretensions and claims

without question, and on recovery became enthusiastic supporters basing the claims on their own experience. After a time relapse followed and they began to recognize that their credulity had deceived them.

A number of prominent medical men conceal the real cause and go here and there, claiming other disabilities and hoping that from treatment of their assumed diseases, they can escape from the real ones. Others visit spas, sanatoriums and mineral springs abroad and in this country. A much smaller number, openly go to reliable sanatoriums and make strenuous efforts with success.

The medical man of all others should be free from spirit and drug neuroses. In many ways they destroy his usefulness and mar his professional reputation more than anything else. In the business world and among all classes there is a growing sentiment that the physician of all others, should in his own life exemplify his teachings, and be an example of good health.

THE MOTHER'S NEGLECT OF THE CHILD'S NOSE, THROAT AND EARS.

HAROLD HAYS, M.D., F. A. C. S.,
New York.

Unfortunately the child is very susceptible to the attacks of infectious organisms. Unfortunately the child is unable to interpret the infections to which these organisms give rise, but fortunately Nature seeks to give us objective symptoms such as temperature, rapid pulse, a sick look, and a lack of playfulness—all of which make us suspect that the little one is not itself.

However, it is not in the apparent cases that neglect is seen. It is usually on the border line of the serious condition that I wish to dwell.

Does the average mother realize what it means for her child to be running around with a cold in the head, with a thick muffled voice, with a slight mucous cough, with enlarged glands underneath the jaw? Does she attempt to analyze what these things may mean, and that a cold in the head may lead to pneumonia, and the thick muffled voice may indicate some throat obstruction of serious consequences; that the mucous cough may mean a serious bronchitis, and the enlarged glands underneath the jaw may indicate a tuberculous infection? I think not. It is a common custom for mothers to watch over the bedside of their little ones while they are very ill and to spend many a sleepless night in worrying until they recover, but it is seldom that they think of warding off these serious illnesses by exercising caution at a time when a little care would mean so much.

Perhaps enough has been said within recent years about the advisability of removing tonsils and adenoids, or both, but many times the parents are inclined to think more of their own feelings than they are of the welfare of their child. It frequently happens that advice is given for the removal of tonsils and adenoids, and the mother leaves the physician's office stating that she will "talk the matter over" when she gets home, with the result that these serious obstructions, which are continually a menace to the child's health, are allowed to remain there month after month simply because the parents cannot stand the agony of having their dear one operated upon. A mother consulted me about a year ago. Her child was a mouth breather, puny, illy nourished, and below par in every particular. The tonsils were large and diseased, and an adenoid obstructed the en-

tire nasopharynx. I advised an operation as soon as possible, and arrangements were made. The following day I received a note from the mother stating that she was "too nervous" to have her child operated upon. I immediately wrote her a severe letter in which I stated that frequently parents were willing to give their children everything in the world for their happiness, but frequently neglected the most important thing which would increase their health. In other words important operations such as these are often deferred because the mother hates to go through the torture of watching her child suffer for a short time. I am glad to say that this mother heeded my advice and today cannot thank me enough for having written her.

Another case that came to my attention was that of a little child of three and one-half years, who was going down hill very quickly on account of a severe nasal obstruction due to tonsils and adenoids. The mother of this child consulted ten different throat specialists trying to find one who would not tell her that an operation was necessary. I was the last of the ten, and like the others told her that it was impossible for the child to develop properly without having the obstruction removed. I believe that I shamed her into the operation but she frankly admitted that she had wasted a whole year (in which time that child was susceptible to any sort of throat infection), trying to find some irresponsible physician who would tell her that the operation was not necessary.

The mother's neglect of a child's ears is another important matter. If the child happens to cry because of ear ache, or run a high temperature, she will often be worried enough to call in a physician, but I refer particularly to the deafness that starts in early childhood due no doubt to repeated colds in the head or to lack of proper cleaning of the ear canals. Such conditions demand proper attention, and I cannot too strenuously insist upon parents watching the hearing of their children at stated intervals. When one sees so many cases of progressive deafness later on in life, which arises from neglected ears in childhood, he is inclined to feel that the average mother does not appreciate that Nature is ever giving warnings which are only too easy to heed.

11 West 81st Street.

How to Clean Salvarsan Needles.

Dr. Henry Clay Baum, Professor of Dermatology and Syphilology in Syracuse University, has a method for cleaning salvarsan needles which has proven satisfactory to him.

He takes a piece of soft, ductile copper wire, slightly smaller than the diameter of the lumen of the needle, and dips the end of it into Parrot metal polish and introduces the wire into the proximal end of the needle. He then draws that through for the entire length of the wire—a foot or two; dries the wire; again dips it in the polish and draws it back until the needle is absolutely cleaned throughout its entire length. This rinses out very easily; acts quickly; does not stain the hands in carrying out the technic, and, having little grit, does not wear away the surface of the needle. The polish has the additional advantage of being inexpensive.

Oftentimes severe reactions following salvarsan can be traced to the fact that the lumen of the needle is dirty. Dr. Baum gets no reactions because he has a technic which is admirable.

ANESTHESIA; THE ANOCI TECHNIQUE OF CRILE; NARCOSIS VERSUS GENERAL ANESTHESIA.

From the Surgical Clinic of

William Francis Campbell, A.B., M.D., F.A.C.S.

PROFESSOR OF SURGERY IN LONG ISLAND COLLEGE
HOSPITAL.

Brooklyn, N. Y.

Anesthesia: Our anesthesia methods throughout the profession have steadily improved from year to year, and present a most creditable record when compared even with the remarkable advances in operative technique. In fact, anesthesia is so interlocked with the operative technique, that real advance must concede to anesthesia its prime importance, and give it at least equal consideration in appraising the various factors which must co-operate in the complicated organization of an operation.

Knowledge always confers dignity and importance upon its votary. So anesthesia by being made the subject of scientific investigation and experimentation has ceased to occupy a subsidiary position. It has risen to the importance of a specialty by attracting many willing to devote themselves solely to its exploitation. We now have a goodly company of professional anesthetists fostered by the demands of the modern hospital and the patronage of an intelligent public.

The professional anesthetist, the most recent invader of the specialists' field, has made for himself a permanent place as a necessary coadjutor of the surgeon's art.

Every progressive surgical clinic must be constantly checking up its anesthesia results and seeking new methods which better safeguard the patients' interests.

We have always contended that ether is the safest general anesthesia in use, nor have we been disappointed with the results. In a fairly active surgical clinic during the past three years, no deaths have occurred on the table or within twenty-four hours after operation. In fact no accidents have occurred which could be attributed to the anesthetic. We regard that these happy results are due to the fact that the anesthetist has been in the hands of a professional anesthetist whose skill and experience are a valuable asset both to surgeon and patient. We have used the open drop-method with the Ferguson Cone. Complete anesthesia is usually obtained in from four to eight minutes, on an average two and a half ounces of ether are used to put the patient thoroughly under, and the average amount in addition required to maintain narcosis in major cases of abdominal surgery, is six and one-half ounces. Our anesthetist observes that these figures are somewhat higher than the claims of others, but allowance must be made for free evaporation by the open method.

Pre-Anesthesia Measures: Fear and worry on the part of the patient contemplating an operation are two serious leaks in his vital capital, and should be prevented by such measures as inspire confidence in the final result, and faith in those who are to guide the patient through the operative ordeal.

Fear and worry quickly lead to exhaustion and are competent causes of shock. For a patient to approach an operation in the fear and worry mood is as imprudent as to embark on an enterprise without sufficient capital in the bank.

Fear and worry can be largely eliminated by atten-

tion to the little details, the importance of which is often obscured by what are regarded as the larger issues. The general principle which we try to insist upon in the employment of pre-anesthesia measures is to narrow down the patient's field of mental impressions to their smallest possible focus, and then to have the residuum only an impression of quiet confidence in the final result. Now this narrowing down the field of mental impressions is the key to the psychology of pre-anesthesia measures. How is it accomplished?

Mechanically: By having the anesthetic room so arranged that its atmosphere puts the patient at his ease. It must be quiet, remote enough from the operating room to prevent contact with the operating staff or paraphernalia of the operating room. Nothing can be more disturbing to a patient than the sight of masked surgeons and assistants, and formidable apparatus suggesting the tortures of an inquisition chamber.

There should be no talking, no heavy foot-falls, the only sound permitted should be the voice of the anesthetist speaking to the patient in a calm, reassuring tone.

There should be no lifting or handling of the patient while narcosis is being established. To attempt to shave or prepare the operative field, or place the patient in the required operative position only renders the patient less responsive to suggestion and unnecessarily prolongs the preliminary stage of anesthesia.

Medically: Any medicament that soothes and sustains the patient is a valuable adjuvant in the preparation of the patient for operation. The bromides given the day before operation tides the patient over an anxious night and brings him to the table refreshed and soothed by sleep. An hour before operation a hypodermic injection of morphin and hyoscin puts the patient in a sleepy, unresponsive condition and thus again contracts the field of mental impressions.

Mental Suggestion. We are confident that mental suggestion is a powerful adjuvant to anesthetization. We mean by that, suggestions audibly made to the patient while he is inhaling the ether. Suggestions of encouragement, assurances of safety have a wonderful effect in making the patient pliable and in releasing his will to that of the anesthetist. The one thing that the patient wants to know is that "*everything is all right.*"

This exact phrase our anesthetist repeats at definite intervals in a firm and quiet voice which passes into a sort of droning monotonous lullaby, which itself suggests sleep. During this suggestion no outside stimulus is permitted to break in upon this anesthesia lullaby; for the purpose of this procedure is to compel the patient to concentrate upon one thing, and that is the idea that he is dropping off into a natural sleep. Anesthesia at its best is not an agreeable procedure, but it can be robbed of much of its terror if it be given with a due regard to the humanities. Even in giving an anesthetic, kindness and sympathy play an important role; in fact our technique will lose nothing in precision and gain much in efficiency if permeating it all are the principles of the Golden Rule.

The Anoci Technique of Crile.

Those who have been practically interested in the evolution of surgical technique have felt that there was just one more goal to attain to make the modern

operation satisfactory, viz: the elimination of shock. But shock was for a long time such an indefinite entity; the subject of much speculation, but little practical experimentation, that not much was accomplished in this field until there appeared the classical contribution of Crile, with his indubitable evidence, founded upon extensive experimentation, which placed the cause and prevention of shock upon a rational basis.

Anesthesia gave us the painless operation, antiseptics the feverless convalescence; but there was one more ideal to attain, and this ideal is the gift of Crile—the *shockless operation*. We believe that this is the most important contribution to surgery that the twentieth century has thus far witnessed. Its far-reaching importance is not yet appreciated.

We now know that shock is a condition of vital exhaustion produced by excessive nerve irritation, hemorrhage, or sepsis, and characterized by vasomotor paralysis and abnormally low blood pressure. But Crile has taught us much more than this; he has demonstrated the integration of the nervous system, and shown that shock is not a condition associated only with traumatism, but that it may be produced by divers causes, such as fear and worry, physical injury, infection, hemorrhage, excessive muscular exertion, starvation, insomnia.

Shock is really excessive fatigue, exhaustion. The vital energy stored in the brain is depleted to a point below which vital integrity is menaced. Now the climax of Crile's work is not in the fact that he has definitely classified surgical shock, but that he has placed shock upon such a broad scientific basis that surgical shock is found to be but one of the incidents in the broad gamut of life's exigencies.

Shock may be approached through many avenues of which traumatism is but one. The histological changes are identical, whether they are caused by emotion alone, by physical injury alone, by hemorrhage alone, by starvation alone, by insomnia alone. Any one of these various factors acting alone or in combination produces the same changes. This conception of shock so inclusive and comprehensive, at once broadens the horizon and revolutionizes our therapeutic endeavors.

The prevention of shock no longer consists of measures employed solely at the operating table; it begins long before the actual operation, it takes cognizance of the patient's emotions, endeavors to banish fear and worry, encourages an equitable and hopeful preoperative mental attitude, and conserves the patient's vital capital for the traumatic ordeal which operation imposes. Thus the surgeon must be something more than a skillful manual technician, he should be a practical psychologist versed in the technic of mental suggestion that creates an atmosphere of courage and hope.

We have discovered that while general anesthesia gives the painless operation, it does not insure a shockless operation. Inhalation anesthesia protects the brain against destructive psychic strain, but not against the effects of local operative injury; something additional is needed to protect the brain from operative strain, and this "one touch more" has been attained by combining general anesthesia with local anesthesia and thus excluding from the brain all stimuli, both psychic and traumatic.

The final aim of surgical technic is the prevention of shock and Crile has founded a new principle of operative surgery in introducing anociassociation. Thus

by blocking the operative field with local anesthetics the brain is protected from the effects of local operative injury. In other words, the field of operation by the use of local anesthetics is temporarily detached from the brain, and thus the brain receives no stimuli from the traumatized area and discharges none of its stored energy.

In our experiments with this method of operating we have been most enthusiastic over both the immediate and remote results. After all, the operator does not always appreciate the results of his operation. He is often satisfied if the patient leaves the table in good condition; he concerns himself little about the postoperative sequelae unless they are positively dangerous. It is the nurse who patiently follows the postoperative convalescence that can give the best evidence, and she it is who is most enthusiastic about the anoci technic. The postoperative distress both in wound and intestine is minimized and often nil, the convalescence is more rapid, and many of the unpleasant memories associated with a hospital experience are obliterated.

We have found that the practice of anociassociation does not begin at the operating table; it begins when the patient enters the hospital. Anociassociation begins with the abolition of fear and worry. The atmosphere of courage and cheer imparted by the hospital attendants does much to fortify the patient. If the patient is to remain in the hospital several days before operation, measures should be employed to quiet the nerves and most important of all, to insure refreshing sleep. There is nothing to equal sleep for restoring and conserving vital energy. A patient who has been deprived of sleep is a patient whose vital capital has been impaired; and to come to the operating table thus handicapped is like embarking in an enterprise with no capital in the bank.

Furthermore, the blocking of the operative field by local anesthesia not only protects the brain from operative strain and thus prevents shock, but it insures to the patient a painless postoperative wound. Many of our patients on recovering from the anesthesia doubt that they have been operated upon, because they can feel no wound, and the postoperative distress that comes from intestinal paresis and gas pain is minimized and often obliterated. In a word, there is a marked contrast in the postoperative convalescence of patients operated on by the anoci method and those without it.

During the past year we have kept accurate records of our patients during the operation by having the pulse recorded every five minutes. The pulse is an accurate guide of the patient's condition during operation, and the surgeon who seeks to interpret it intelligently will find that it is the true nocimeter of his technic. The more accurate his anociassociation, the more stable the pulse; whenever the pulse becomes rapid there is always a cause in faulty technic, and after a time the operator can correlate the rapid pulse and faulty technic with gratifying accuracy, so that the state of the pulse at the close of the operation is almost positive evidence of the character of the technic employed.

Without anociassociation it was the rule that our patients left the operating table with pulse accelerated; after a laparotomy the pulse would average from 100 to 120. With anociassociation it is the rule for our patients to leave the operating table with the pulse better and slower than when the operation began. Of course, we appreciate the stimulating ef-

fects of ether on the pulse much more at the beginning of operation than at the close when the quantity is much diminished, but comparing patient with patient, the anocioperation, judged by the patient's pulse is indisputably superior.

General Anesthesia vs. Narcosis.

Another important observation of Crile that has modified our anesthesia methods is his statement that "anesthesia and many instances of unconsciousness are merely phenomena of acidity." "Whereas the blood in both man and animals under normal conditions is slightly alkaline or potentially alkaline, at the time of death, whatever its cause, the potential or actual alkalinity decreases and the blood becomes actually neutral or acid." The inference being made that acidity of itself may be the actual final cause of death.

Another striking observation is that not only acidity of the blood is increased by inhalation anesthesia but that the production of acidity is the method by which anesthesia itself is produced. Now if the state of anesthesia is due to an induced acidity of the blood, then many clinical phenomena are not only explained by this theory but serve to substantiate it: Such as the precipitation of acidosis after general anesthesia; the reason for the use of intravenous infusions of bicarbonate of soda; the great thirst after inhalation anesthesia—water like air neutralizes acids.

On the other hand narcotization with morphin however deep produces no acidity, the normal potential alkalinity of the blood is not disturbed.

Bearing in mind these two facts in conjunction with the anoci technique we have been enabled

1st. To reduce the amount of ether used about fifty per cent. In other words with preliminary morphin narcotization in conjunction with the anoci technique only about one-half as much ether is necessary to do the same amount of work.

2d. There are a number of operations which as a matter of routine are now being performed under general anesthesia, which can and ought to be performed by local anesthesia with preliminary narcotization, because of the greater safety to the patient.

Hernias, goiters, appendectomies, intestinal obstructions, cysts, superficial neoplasms, hemorrhoids, all these are admirably adapted for the anoci technique. Such an operation as the Talma-Morrison operation for the abdominal ascites of cirrhotic liver can and ought to be given the benefit of this technique.

A patient with a functionally impaired liver is never a good subject for general anesthesia. In a recent case of this kind we were able to complete the operation with a variation in the pulse of only ten beats. At the start the pulse was 78. After the evacuation of the fluid the pulse rose to 100 and then came down to 80. During the rubbing of the hepatic peritoneum and the peritoneum of the diaphragm it again rose to 86. At the completion of the operation the pulse was 74, four points lower than at the start.

Now this patient was in a drowsy condition when the operation began. His face was covered with the ether mask and extract of orange was dropped on the mask at intervals, sufficiently to produce a psychological effect. The tissues at the field of operation were carefully infiltrated with local anesthesia. There was perfect relaxation of the abdomen throughout the entire operation which lasted twenty-five minutes. Nor has the patient any other idea than that he was given a general anesthesia as he afterwards commented on the skill with which it was given.

The ether mask and the orange extract are a valuable asset in the psychology of local anesthesia. It closes the eyes, diverts the attention, and satisfies the expectations of the patient, three important avenues to block during operation.

A woman, sixty-five, was sent to the hospital because of an acute obstruction of the bowel. It was one of the usual cases which the surgeon gets, viz: a late case, five days after the initial symptoms. The abdomen was distended, patient toxic, vomiting, pulse 120, temperature 100. In a case of this kind general anesthesia is not only contraindicated, its use is a distinct blunder. This patient is in a condition of shock induced by the toxins. To add to this condition general anesthesia, is only to precipitate the impending dissolution.

Surgeons have been very much dissatisfied with their past results in cases of intestinal obstruction and justly so. The cause of this dissatisfaction rests partly with the physician and partly with the surgeon. It is the rarest thing for a surgeon to get an early case of intestinal obstruction or one that has been rationally treated by the physician.

There is no medical and surgical treatment of acute intestinal obstruction, the treatment is preoperative and operative. This definitely fixes the status of the physician and surgeon; the one prepares the patient for operation, the other performs the operation, and the preparation is just as important as the operation, and the operative results will not improve until the surgeon receives the patient rationally prepared.

This is what should be emphasized; when the physician suspects a case of intestinal obstruction his farther treatment should be directed toward putting the patient in the best possible condition to receive the benefits of operation. It is obviously irrational to endeavor to blast an opening through the obstruction by means of cathartics.

This treatment can accomplish only three results. By this constant irritation, the obstruction's grip on the bowel is only tightened. The constant purging bleeds the patient into his own bowel and lowers vital resistance. The bowel proximal to the obstruction is flooded with fluid feces, the toxic absorption from which is slowly precipitating a state of shock. It is difficult to get the average physician to appreciate that the aim in the treatment of all acute abdominal conditions should be to put the gastrointestinal tube in a state of quiescence; that the great disturbing factor is peristalsis and that everything that stimulates peristalsis is to be eliminated.

The introduction of food and the use of cathartics are the two disturbing elements. The use of either increases peristalsis and aggravates the pathology already initiated. The clear indication in these conditions is to close the mouth and open the anus. Now the statement was made that the unsatisfactory results in testinal obstruction were due partly to the physician and partly to the surgeon. Even if the cases do come to the surgeon late, can more of these cases be saved?

We believe that by substituting narcotization with the anoci technique in place of inhalation anesthesia and by temporarily ignoring the cause of the obstruction and doing the simplest procedure possible to relieve the distended intestine, viz.: taking the first loop of distended intestine that presents and drawing it into the wound, emptying it and anchoring it in situ, more lives will be saved. With this line of procedure as a guide our results in intestinal obstruction have improved. Now this patient with in-

testinal obstruction to whom I have already alluded was in a mild condition of shock or vital exhaustion. Her pulse as I have said was 120 and poor quality. One-half hour after narcotization the pulse had fallen ten points and the quality was better. We therefore started the operation with pulse of 110. The field of operation was carefully infiltrated with novocaine, the abdomen opened, a loop of distended intestine was drawn out, emptied and anchored in the wound. The operation occupied twenty minutes. At the close of the operation the pulse was 100, twenty points better than when the patient entered the hospital. This patient returned to her home two weeks later. It is true she had a fecal fistula, but she was alive.

Now this is just the kind of a case in which inhalation anesthesia and elaborate attempts to find the site of obstruction can only result fatally.

The extent to which this procedure can be used is well illustrated in the case of a patient, female, aged twenty-six, who came to the hospital presenting a double inguinal hernia and chronic appendicitis. Now this is the kind of case ordinarily done under general anesthesia and surely without inviting any criticism. We chose, however, narcotization with the anoci technique because we believe it is the method of choice wherever it can be used. The pulse at the beginning of operation was 82. There was little variation until the cecum was delivered through the right inguinal incision when owing to the pulling on the gut the pulse rose to 90. After the appendix had been removed the pulse rate fell and remained practically the same during the operation in the left inguinal region. At the close of the operation which consumed one hour, in which there was a radical cure for hernia on both sides and excision of the appendix, the pulse was 78,—four points better than when the operation was begun. Nor was the patient aware that she had been deprived of inhalation anesthesia as her subsequent conversation attested. The deception practiced by inhaling orange extract had been complete.

We might cite many other cases of goiter, hemorrhoids, superficial neoplasms, cysts, etc., illustrating this technique. We believe as this technique becomes more refined, its field of usefulness will become more extensive, and we shall use less and less general anesthesia.

The method takes time, and careful attention to detail; it individualizes the patient; it necessitates the intelligent co-operation of every member of the hospital staff; but it pays, and the returns are shown in a marked reduction in the mortality rate and the postoperative morbidity.

394 Clinton Ave.

Reporting on 150 operative cases in which spinal anesthesia by means of novocain was employed, George Gellhorn (*Surg., Gyn. and Obst.*) says that since Röntgen's discovery, no greater, no more stupendous advance in our therapeutic procedures has been made than this method of rendering the most extensive operations absolutely painless. A method by which many human lives may be saved cannot disappear from our therapeutic treasury, and it requires no prophetic gift to predict that from year to year it will become more appreciated and maintain its high place among the methods of surgical anaesthesia.

Profuse hemorrhage is not characteristic of renal stone.

STRICTURE OF THE URETHRA.*

HENRY H. MORTON, M. D.

CLINICAL PROFESSOR OF GENITO-URINARY DISEASES IN THE LONG ISLAND COLLEGE HOSPITAL; GENITO-URINARY SURGEON TO LONG ISLAND COLLEGE AND KINGS COUNTY HOSPITALS AND THE FOLHEMUS MEMORIAL CLINIC, ETC.

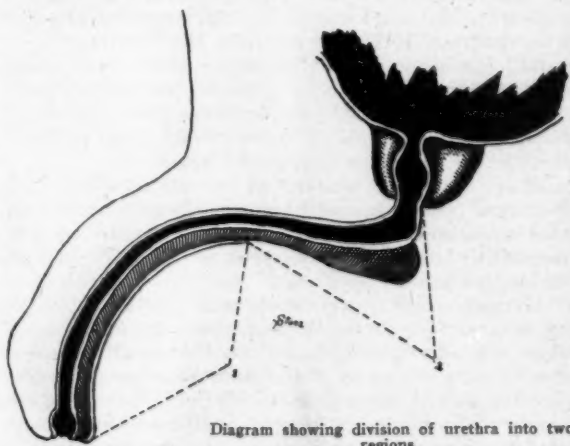
Brooklyn, N. Y.

We have to-day a case of stricture of the urethra for operation, and while the patient is being anesthetized, I will say a few words about the general subject of stricture.

In the case of a soft or recent stricture an operation is not to be considered when the stricture can be brought to absorption by gradual dilatation by means of sounds or dilators, but as the stricture grows older it becomes dense, firm and fibrous. Dilatation is then no longer practicable and we have to proceed to surgical measures for its cure. It is no longer possible to cause its absorption, although various methods, such as electrolysis and continuous pressure by gradually increased sized bougies, have been tried. For its relief the only method is to cut the stricture band with a knife.

There are two operations for the treatment of stricture, namely internal urethrotomy and external urethrotomy, and the choice as to which operation should be employed depends entirely upon the location of the stricture in the urethra.

For purposes of operation we may divide the urethra into two regions. I will make a rough sketch upon the blackboard to illustrate my meaning:



Region One extends from the meatus to a point five inches backwards from it and its termination corresponds to the peno-scrotal junction.

Region Two reaches from a point five inches from the meatus backwards to the prostatic urethra and includes the fixed urethra, the bulbous and the membranous.

For region one, internal urethrotomy is the only operation to be employed.

For region two, external urethrotomy, through the perineum, must be used.

Internal urethrotomy derives its name from the fact that no incision is made through the skin, the urethrotome being passed into the urethra through the meatus. In France and Germany the urethrotome devised by Maissonneuve is the instrument most commonly used, but in America the urethrotome of Otis, on account of its numerous and manifold advantages, is the instru-

*Clinical lecture at Long Island College Hospital.

ment preferred. In my own practice I limit my use of the Maissonneuve to those strictures which are so narrow as to prevent the introduction of the Otis urethrotome. By dividing these narrow strictures first with the Maissonneuve it is possible to enlarge them so that the Otis can then be introduced to bring the incision up to its full size. We will demonstrate the technic of using it upon the patient of to-day.

One word as to the after-treatment: Let me insist upon the importance of keeping the patient in bed for several days after the internal urethrotomy. It is highly dangerous to do such an apparently simple operation in a physician's office and allow the patient to walk about. Let me repeat again the indications for internal urethrotomy. This is only applicable to strictures which lie in the first five inches of the canal. If the stricture lies in the bulbous or membranous urethra, internal urethrotomy is not indicated and the case must be treated by external urethrotomy.

We find on looking over hospital statistics that the apparently slight operation of internal urethrotomy carries with it a mortality of one to two per cent., and the deaths arise from hemorrhage, infiltration of urine, followed by sepsis, or, which is more common than all, from urosepsis resulting from pyelonephritis.

It is important, then, before attempting even such a slight operation, to be sure of the functional capacity of the patient's kidneys.

Another unpleasant complication which often follows internal urethrotomy is a deformity of the penis. The incision of the stricture causes a linear scar upon its roof which draws tightly during the erection of the penis and, acting like a bow-string, causes a curvation of the penis. Fortunately, this disability usually subsides unless the incision has been made too deeply in the spongy tissue of the corpora cavernosa, so that in case a heavy band of scar remains on the roof, the disability may be permanent.

To summarize the indications for internal urethrotomy:

We should employ it in a stricture which is fibrous, or non-dilatable; in resilient strictures, or those which resemble a piece of India rubber and spring back immediately after dilation; in irritable strictures, or those which take on inflammatory action after the passage of a sound; and in those cases where urethral fever always follows the passage of a sound.

Let us now turn to the consideration of the operation of external urethrotomy. External urethrotomy is applied to strictures which are located in region two; that is, in the bulbous and membranous urethra. I do not mention the posterior urethra because that is never strictured except from traumatism. I have never seen but one case of stricture of the posterior urethra, and that was after an operation for lithotomy, done some years ago. This man had a distinct traumatic stricture in his posterior urethra.

We have two forms of external urethrotomy; that is, with the guide, and the operation which was devised by Professor Rand, is the most feasible, and external urethrotomy without a guide, as formulated by Wheelhouse.

Our patient, who is now anesthetized, has strictures both in region No. 1 and region No. 2, so that it will be necessary, first, to treat the deep strictures by an incision through the perineum, and after having disposed of those, we will cut the strictures in the pendulous urethra by means of the Otis urethrotome. In this case we were fortunate in being able to get a whale-

bone guide into the bladder before the patient was anesthetized, and it has been left lying in situ. Introduction of the guide facilitates the operation very much because we are sure that we shall gain access to the bladder, whereas without a guide the most capable surgeon will sometimes fail in his object of reaching the bladder through the perineum and will, perforce, be obliged to make a suprapubic opening.

The first step in the operation consists in slipping a Rand's tunneled staff over the whalebone guide, and passing it down until it is arrested by the stricture in the perineum. I now make an incision through the skin of the perineum and expose the urethra covered by its layer of muscular fibers. I open the urethra by an incision and grasp the two edges with Kocher's forceps. When the edges of the urethra are retracted I can see the end of the staff lying within it. I grasp the filiform guide with the forceps and my assistant withdraws the tunneled staff. I pull the proximal end of the filiform guide out through the incision in the perineum and the guide now extends from the bladder through the wound out in the open air. I now slip the groove in Rand's tunneled knife over the filiform guide and carry it into the bladder, dividing the bands of stricture in front of it as I go. I next introduce a gorget and with my finger I feel a stricture band still which is not sufficiently divided. This I cut with a probe-pointed bistoury. I now introduce my finger through the wound and find I have divided all the stricture bands, and with my finger I explore the bladder to make sure that there is no calculus.

I now turn my attention to the stricture in the anterior urethra. I introduce the Otis urethrotome through the meatus down to my incision in the perineum, dilate to 30, pull out the concealed knife, and cut the bands in the anterior urethra. I pass a 30 bulbous bougie through the urethra and find that the bands are all cut. I next pass a 30 sound with a Guyon curve, through the urethra into the bladder. It enters with ease, thus assuring me that the stricture bands have all been divided, and the entire way is open along the urethra. The operation is finished by uniting the urethra with interrupted sutures of catgut on its floor, leaving, at the lower angle, room for a drainage tube and packing. The skin is then closed with silkworm gut and the operation is concluded by passing a 34-French perineal tube through the lower angle of the wound into the bladder, testing its drainage capacity, and then holding it in place with a silk suture passed through the skin and the tube.

Having now completed the operation, there are certain points in the after-treatment, to which I wish to call your attention:

The bladder drainage through a large tube is of the utmost importance. Through this tube the urine is conducted from the bladder and is prevented from coming in contact with the freshly-cut surfaces, thus lessening the chance of urosepsis. Hemorrhage is easily controlled by a firm packing around the tube. The tube is removed in from four to seven days, and the patient is gotten out of bed in a week's time with total closure of the wound in about three weeks.

The cases which demand external urethrotomy usually have heavy strictures and demand the passage of sounds, not only during convalescence, but during the subsequent life of the patient. My practice is to pass a No. 30 straight sound through the meatus down to the perineal tube every forty-eight hours, and after the tube is removed a curved No. 30 sound is passed into the

bladder every two or three days. The intervals of passing the sound are gradually lengthened so that on leaving the hospital the patient takes a sound once a week, and for several months the passage of a sound once a week is enough to maintain the calibre of the canal, but to preserve the patulousness of the canal in nearly every case a sound must be passed at certain intervals.

I absolutely disagree with those surgeons who make the statement that after cutting a stricture there is no recontraction, for I have seen too many cases where sounds had not been passed and where the stricture had re-contracted. I remember several cases which came to us at the Kings County Hospital where an external and internal urethrotomy had been done for stricture on two previous occasions and both times the patient had neglected the subsequent passage of sounds and he came to us a third time with re-contracted strictures of such small calibre that we were only able to get a filiform through. I believe that the surgeon who fails to warn his patient of the necessity of passing a sound during the rest of his life fails in his duty.

Now let me give a resumé of the indications for external urethrotomy. It will be understood, of course, that every stricture more than five inches from the meatus, that is, located in the bulbous or membranous urethra, requires external urethrotomy for its division. To classify strictures in this region which much be cut, we can classify them as follows:—

- (a) Tough fibrous stricture which is not amenable to dilatation.
- (b) Impassable stricture complicated by retention of urine.
- (c) All cases of rupture of the urethra.
- (d) Urinary infiltration.
- (e) Traumatic stricture.
- (f) Resilient strictures which rapidly contract after dilatation.

A word as to the prognosis. As to the ultimate cure of strictures, a light stricture shows but little tendency to re-contraction, while a heavy stricture will always re-contraction unless sounds are passed at regular intervals. We may truly say "Eternal vigilance is the price of liberty" to pass water freely.

As to the prognosis as to life; the operation of external urethrotomy, per se, is not dangerous, but on account of some of the complications present, for which the operation is done, there is a considerable mortality in cases of infiltration of urine, of which we see quite a number in the course of a year, especially at the Kings County Hospital. If we can get the cases promptly to operation before general sepsis has occurred, the prognosis is not bad, but, unfortunately, many of these individuals are tramps and hoboos and they lie up in some lodging house until they are in the last extremity and when finally our external urethrotomy is done, extensive sloughing has taken place, the patient is already septic and the death rate is high.

Another condition which leads to a high mortality rate following external urethrotomy, are diseased kidneys which are so likely to complicate stricture and retention of residual urine. Any operative interference with the urinary tract brings on urosepsis and the patients die of suppression of urine.

32 Schermerhorn Street.

A characteristic symptom of renal calculus is a sharp, stabbing pain, felt when the fingers are pressed deeply into the ilio-costal space, outside the margin of the erector spinae muscle.

Ideas in Racial Distribution.

Viewing the monumental place of Greek in its position as affecting men's ideas of themselves and the world, in art and law, science and morals, we must face the fact that the world-at-large has yet several vast root-stocks to assimilate.

Chinese and Korean, Manchu and Japanese, Slav, Tartar and Mongol, form an agglomerate set of values which we must consider.

To the Semitic stock we owe much in medicine and agriculture. The Carthaginians wrote our first agricultural treatise (Mommson) and this passed into circulation among Latin, Italian, Sicilian, Spaniard, Greek and Thracian, and also went through Asia Minor.

To the Hebrew we owe our earliest ideas of state medicine. To the writings of Moses we owe, indeed, our "first principles" of hygiene.

The Arabs have contributed algebraic science, and much of the medieval foundation of chemistry.

Vast as has been Semitic influence, and exerted over a territory out of proportion to Semitic sway, politically, for the Semitic races are too self-jealous to rule empires, we shall undoubtedly see, in the future, that Slav and Mongol will throw into the language and customs of the era a greater admixture than any of us may measure.

Such a prediction may seem as strange to us as one made in the Roman days about the ancestors of Dane, Saxon and Teuton. In the nature of things the long apprenticeship of Slav is sure to produce a mastery. And then the East and West, Slav and Mongol, will clash. The language of Russia is beautiful. It is inflected, the nouns having various forms which give elasticity to the sentence, as in Latin.

But the verb is simple, although full of irregularities, and has but past and present, as in English. The future being compound.

Japanese, on the contrary, is even more simple and flows like water from one root syllable to another, each of two elements: consonant and vowel, in this order.

While Russian employs *li* to ask a question, Japanese uses *ka*. Each has many particles which we cannot translate, because we have no equivalents for them. We change the order of our words, or employ a voice-stress. They have many particles of fine shades of significance. But Russian pales in this before the rising sun of Japan.

On the other hand, in each the verbs are rich; and in Russian the vocabulary full.

As a matter of fact, we cannot claim absolute scientific knowledge, and the introjection of Slavic and sinico-Japanese elements may be positively a directing force in the evolution of modern science. To this linguistic and temperamental peculiarities may contribute.

The physician will not be bored in studying Russian and Japanese, and they open most interesting psychology territories, full of suggestive idioms.

To the psychologist these linguistic pathways open doors of amusement, learning and beauty. For mind is as variegated as the species of aboriginal flora and fauna.

J. F. Percy (*Surg., Gyn. and Obst.*) uses an electric heating iron and a water cooled speculum in treating inoperable uterine cancer. Heat does not encourage the extension of metastases, while the curette and knife do. Scar tissue is not formed after the use of the curette, but it is the usual sequel after the application of the heat; and Percy has yet to observe the redevelopment of cancer in cicatricial tissue.

With the Wounded of the Belligerent Nations

(Photographs from Janet M. Cummings)

Military surgery is teaching civil surgery marvelous lessons these parlous days. French, German and English army surgeons are performing miracles in the field and base hospitals of Belgium, France, England and Poland. And, be it said, some of the American sur-

which is injured. Even operating dental surgeons are not forgotten, for the German army has Dr. Guido Fischer, dean of the dental school of the University of Marburg, doing the oral surgery at a big hospital near the front. Fischer made himself beloved by American dentists in 1914, when he visited many of our larger cities and amazed men by his wonderful skill in operating on the teeth and jaws under local anesthesia.

Sir Victor Horsley is accomplishing great things neurologically on English soldiers and Tuffier has been of the most unusual help to the French. Conservation is eliminating some of the post bellum horrors. Surgeon General Parthey of one of the German armies operating in Poland, has reported that during the month of January, of the 1,587 severely wounded taken to one field hospital, where Geheimrat Prof. Dr. Tilmann, the Cologne surgeon, was consultant, only 17 died and of all the operations performed on these men, only one was for the amputation of a limb.

The French and English armies are reporting similar small percentages of amputations.

The Servian army is very poorly equipped with medical officers and is depending largely on the American Red Cross physicians, who are under Dr. E. W. Ryan, a graduate of Fordham Medical School. His confrere, Dr. J. F. Donnelly, well known to thousands of American travelers, as a surgeon in the Holland-American Line, and later as one of the officials at Quarantine, New York Harbor, died in March as the result of the hard work

geons operating in the American Ambulance near Paris, have reflected unusual credit on their country by some wonderfully efficient work. Joseph A. Blake, George W. Crile, Carrel and others have been in the forefront of American operators, who are or have been working in France.

When the medical history of the present European war is written two facts will stand out prominently. Only a small percentage of the wounded die and the reckless amputations made on or near the battlefields of other wars are conspicuous by their absence. Conservation of life and limb has been the watchword in all the armies and the results have been very far-reaching. Specialists of every branch are working in the hospitals of the different nations; not here and there a man, but in multitudes. Ophthalmologists, aurists, laryngologists, urologists and abdominal surgeons are attached to all the larger hospitals as well as skilled general surgeons, so that certain wounds can be taken care of by men especially skilled in operating on the particular part of the body



Fig. 1.—Wounded French soldiers, who have been injured on the firing line, being placed aboard French hospital trains for transportation to base hospitals in Paris, Neuilly and elsewhere.

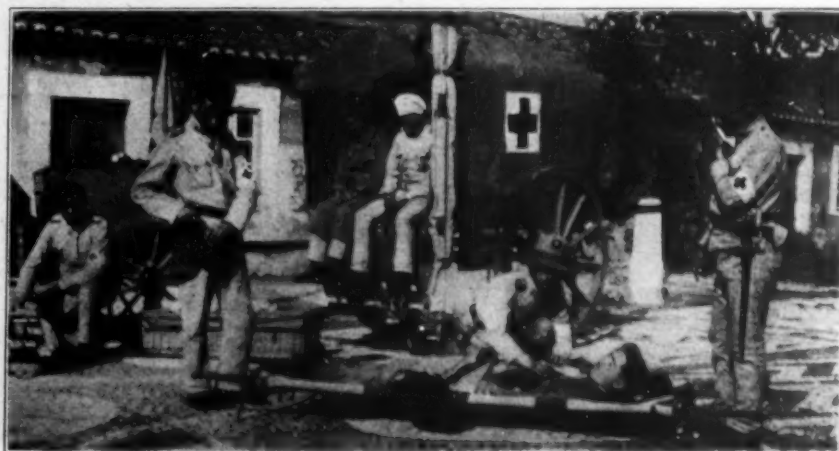


Fig. 2.—The somewhat crude Red Cross equipment of the Servian army. Servia has been sadly lacking in sanitary and medical outfits.



Fig. 3.—First aid on the firing line in Flanders, given by a non-commissioned officer of the Royal Army Medical Corps to a wounded Tommy Atkins of a Scotch Highlander regiment.

and exposure incident to the campaign. The work of the American physicians who have been connected with the French ambulance companies, has been of a high order. Dr. Roger Derby took a party of young New York Surgeons to Paris in January and they were pleased with their two months' stay at the American Ambulance. Several such parties have been organized and are now at the scene of action.

A unit from Harvard Medical School sailed on March 17th to relieve the G. W. Crile unit from Western Reserve University. Dr. Harvey Cushing, Professor of Surgery, was in charge and the party included Dr. Robert Greenough, assistant professor of surgery, surgeon and executive officer; Dr. Richard P.

Strong, professor of tropical medicine, bacteriologist; Dr. Robert B. Osgood, orthopedic surgeon; Dr. Beth Vincent, assistant surgeon; Dr. Walter M. Boothby, anesthetist; Dr. Fred A. Coller, Dr. Elliott C. Cutler, Dr. Philip D. Wilson, and Dr. Marius N. Smith-Peterson, resident surgeons; Dr. Lyman G. Barton, Jr., surgical assistant; Dr. Orville F. Rogers, Jr., medical assistant; Dr. George Benet, laboratory-assistant.

The Harvard unit will have charge of the service until the end of June, when the University of Pennsylvania will send a corps under the direction of Dr. J. William White, Professor of Surgery, to carry on the work during July, August and September.



Fig. 4.—A non-commissioned officer of the German Army Medical Corps dressing a gun-shot wound of the wrist in the rear of the firing line in Alsace-Lorraine.

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NEW YORK, APRIL, 1915.

Join Medical Societies.

It is the duty of every ethical practitioner of medicine to belong to the medical society of that county in which he resides. Membership in that body carries with it membership in his State society. After joining these organizations the physician should go further and affiliate with the American Medical Association. The county society offers distinct local inducements. The State society binds the county organizations together and gives the member added value. The protection afforded against malpractice suits alone ought to warrant every legitimate practitioner in the county in becoming a member of his local society.

The national body, which can be entered for the trifling sum of \$5 per year, beckons to all believers in the advance of medicine. Membership in that organization carries with it a subscription to the *Journal*, which is, bar none, the world's best medical publication. Its carefully edited pages permit the reader to obtain the latest thoughts in medical science; they keep him informed of the news of the profession in America and Europe, and they give him abstracts of leading articles appearing in all of the best European and some of the American journals. The severest criticism which can be passed on the *Journal* is that it contains too much for the average physician to assimilate each week.

The physician owes it to himself to join these societies for by so doing he helps himself professionally, scientifically and financially. The American Medical Association and its component State organizations stand for the best in medicine, for progress, for advance, for the betterment of the profession and its individual members. There are those who object to some of the activities of the national body. It would be strange if

it were not so, for all minds are not similarly constituted. In our great religious organizations there are often serious differences of opinion. Bishops differ with the clergy and ministers with laymen. But the church goes steadily forward as the great elevating agency of mankind.

After all is said and done, an impartial observer of the work of the national and State societies during the past twenty years will report that medicine is on a much higher plane to-day than two decades ago. Physicians know more medicine. Surgeons are more conservative and skillful. Medical education has taken enormous strides forward. Charlatanry has been exposed and the quack is quietly being eliminated. Proprietary products have found that honesty of claims and enlightenment as to formulas means more business and better feeling on the part of physicians. Patent medicines have been shown up for what they are, most of them insidious concoctions which further spirit and drug neuroses. The people, through lectures and lay articles, have learned that physicians are unselfishly striving to preserve the public health and to devise ways and means to heal the sick more quickly and to prevent disease and its spread.

Organization can accomplish mighty things when there is a union of forces. The medical profession should stand together as a man. Christian Science and the various charlatan-isms understand the value of united effort and are profiting thereby.

Medicine alone fails to comprehend.

We repeat that it is the duty of every legitimate practitioner of medicine in this county to join the county, State and national medical associations. He will help himself and his profession thereby.

Physicians are said to be "joiners." Let every man demonstrate his joining qualifications by going into his county society now.

The Sale of Blood.

The prevailing market price of blood is fifteen dollars a quart. In some instances the rate is higher. Sometimes it is much lower. There are many eager applicants. In this gruesome competition many fail and get no chance to sell.

The cynic will say that there is nothing of special import in this. He will say that men sell their souls in New York.

But there is something the matter when men have to sell blood and souls. After all, the factors that operate are the same in most cases.

Blood is cheap, life is cheap, souls are cheap. War makes them so. In the one case we have militarism, in the other industrial warfare. In the one case it is the ambition of kings, in the other that of the master class. For kings must have power and pomp, and the exploiters of labor must have motor cars and palaces and social prestige.

Our economic system is wasteful of men, which is to say it is wasteful of blood and lives and souls. Wherefore are born poverty and crime and disease.

Upon all these shambles batten parasites. Our social pathology has bred a race of sociologists, who live upon the misfortunes of their brethren; theorists, opportunists, doctrinaires, experimenters, investigators and purveyors of charity, whose interests lie in the perpetuation of conditions and to whom society should not look for relief. They are, in the main, self-seekers and retainers of the master class.

But the last Rousseau has not been moulded by the Master Potter.

The Medical Goat.

Mr. Louis Brandeis, in testifying before the Federal Industrial Commission, declared that "we cannot possibly, by any public or private charity, carry the loss we are building up by our industrial system. The State will have to pay for this with compound interest, and compound interest at pawnbrokers' rates. Minimum wage legislation is one means of *relieving* this situation." Until industrial justice displaces industrial autocracy decent conditions will not obtain, and minimum wage scales and charity in all its forms will prevail. Ultimate cure, rather than palliation, will, of course, be attained. In the meantime we ourselves, of the medical profession, will play the part of goats of the second class, the directly exploited masses, of course, holding place in the first class. That about sums up the present curious economic situation in medicine. We are acting in behalf of both the exploited and the exploiters. In so far as we consent to give medical service free, and on the vastest possible scale, we are playing into the hands of reactionary interests, while at the same time we are therapeutically palliating the ills of the poor.

We are serving two masters valiantly but with no high degree of intelligence, else there would not be such manifest inability on the part of the profession to account clearly for its ills. There is great discontent, a realization that something is very rotten in Denmark, but much hopeless floundering when conditions are discussed. All that some of our "thinkers" can see as a way out is socialization of the profession, manifestly a proof that they have completely lost their bearings. While conditions are being relieved for the poor in the shape of minimum wage scales, why should not the profession insist that conditions be relieved for it by payment for service rendered the sick poor, but with the clearest kind of an understanding that the ultimate aim is industrial justice, when poverty will be vastly minimized, and a citizenry restored to independence and manhood shall itself directly pay the fees of a rehabilitated profession for services rendered. To these ends the profession should devote itself. The pursuit of any other spells demoralization. As to socialization, that way spells ruin. Its advocates are the greatest enemies that the profession has. If high intelligence prevailed in our ranks—we speak frankly—these nuisances would be dealt with in the most drastic manner. As a socialized body we should be delivering ourselves over completely as medical serfs to the master class, and would be instruments wherewith the industrial nightmare might be continued. If the hopes of humanity mean anything to us at all, and if our own dignity and traditions are to be upheld, we must destroy this canker. If we care nothing for the people concerned, and if our decadence as a once glorious guild is at hand, then let us bow our heads to the yoke, betray our fellowmen, and place the bay upon the heads of those who would reduce us to the level of letter-carriers.

For our part, we have complete faith in ultimate rehabilitation, not so much because we have confidence in the profession's own ability to save itself, as because we believe that industrial justice will be won by the people, when professional ideals shall be forced up as a necessary corollary. Such a society will have none of your socialization. It will have a medical machine for the purposes of State medicine, but that machine will constitute but a small part of the profession.

Let us beware lest we fall low in the coming years, to be dragged later out of the mire by those who would have *men* attend them in sickness, rather than bureaucratized serfs.

The economic pressure is very great. How great is our resisting power and how intense our wholesome wrath? What is the opsonic index of the profession in this year of grace?

Industrial Hygiene.

Warren, of the Public Health Service, says that medical men must include in their study "the total environment and, if possible, untangle the bundle of influences that in effect are producing disease more surely than the germs which are the direct agents." This in speaking of the problems of industrial sanitation. We cannot hope to do even partial justice to the sick who suffer from industrial diseases, which are legion, unless we know the total environment of our patients. But no matter how successful we may be in our fight for more space, more light, more air, safety appliances, shorter hours of labor, better pay and the abolition of child labor, the fact remains that much disease will always be inevitable, for a great deal of our industrialism has to do with the production of things whose "use" is not worthy of a civilized people. Says Madame Ferrero, the wife of the noted Italian historian (who has shown that machinery does its work at greater cost to society than manual labor, and that the progress made in mechanical industry is a calamity, particularly for poor countries): "Machinery is bent on making man into an insatiable animal at all costs. In order that the machine may not be left with nothing to do, every one nowadays tries to persuade the people that their first and most sacred duty is to eat, drink, smoke, travel about, feast, squander all they can, and ape the vices of the rich. 'Progress' demands it. The corruption of the ancients has become the progress of the moderns. We bow to the machines that we have constructed, forgetting that they are the work of our hands, because they produce riches more quickly and in greater profusion than hands. Let us deduce the conditions precedent to the use of steam and electrical machines. First, an abundance of raw material, or there will be nothing for the machines to transform; second, an abundance of capital to construct them and set them going; third, a great and urgent demand for the object manufactured, a real dearth. But can a dearth be lasting? No, for demand and supply must ultimately balance each other. Why did the great mechanical industry come into being in England, and at the end of the eighteenth century? After the French Revolution England perceived that machines, which she had always disliked so much, would serve her turn at that precise, fleeting moment in helping her to despoil India of her ancient art (the weaving of cottons) and conquer the markets of Europe and America, till then clients of India. She racked her brains to invent every sort of machine. In 1815 when the whirlwind of revolution was spent the world was surprised to find itself saddled with this new monster—the great mechanical industry—which had been born in the middle of the tempest. One of the most awful convulsions in history had spewed it up into the world. It should by rights have disappeared, soon, but instead, the monster not only lived but propagated its kind. The world was dazzled by England's success with her cotton. People in every country hoped to get rich by inventing or constructing machines. Everywhere, people wished, under the pretext of making progress, to feather their own nests."

So it comes to this, that after all, our efforts to make modern conditions of labor half way decent are purely ameliorative. And amelioration itself is a curse if

fundamental error be not affected. It would seem as though the masses were fated to be eternally exploited in some degree. "Back to the land" means but little so long as the land question remains in its present state. People were exploited on the land before they were exploited in industry, and English industrialism was founded and built up on the profits of the slave trade. What more brutish than a peasant living on and off half an acre of land, illiterate, misshapen, alcoholized, worked to death, subject to drought and famine, and saturate with superstition? There is not much fear, however, that it will be permitted great masses of the people to withdraw from industry and go back to the land under decent conditions. The machines and their owners need them and the social order is carefully arranged to insure detention. So we must continue to study industrial diseases, but let us be in no sort of error as regards the actual elements entering into them, and let us, when we consider "total environment," think of the genesis of what we call industrial progress and of its evil side. Then, the "bundle of influences" being partially "untangled," the victims of the system will have our intelligent sympathy and such aid as we can give, medical, legislative and humanitarian, even though the real problem remains unsolved.

In this connection it is well to bear in mind the real reasons for ultraconservative opposition to rational control of the birth-rate.

Medicine the Supreme Art.

Medicine suffers by spectacular comparison with surgery, but in no other way. Surgery is largely a highly developed handicraft, but medicine is vastly more than that. Between the skill required to care properly for a case of pneumonia through weeks and that displayed in the removal of the appendix in a few minutes there yawns a great gulf that no sophistry can bridge. The surgeon really becomes a physician once the appendix is out, and takes on the greater glory. The medical care then looms far above the surgical performance. And the art brought to bear upon the patient before operation is the art of medicine, in the last analysis. Operation is an incidental in the great medical gamut, after all; one of large importance, of course, but subsidiary to medical understanding and care of the sick man. That is the essential. We fear that many surgeons discount the notion that their art takes precedence. There is nothing in surgery as a mere handicraft comparable in its exactions to the demands made upon a physician's diagnostic skill and therapeutic and social responsibilities in a case of incipient tuberculosis of the lungs or in a borderland psychosis. With the exception of gross injuries, what is called surgical diagnosis is a euphemism. The diagnosis of cancer of the cervix is a medical problem. It is a medical disease up to the time that anesthesia is induced and the knife passed through the tissues, and it is a disease the ultimate mastery of which lies distinctly in the province of the physician. Its present management is a matter of crude tissue mechanics. Its future cure will find medicine alone upon a now contested pedestal.

Carcinoma of the stomach is commonly associated with capillary hemorrhage, which appears as coffee-ground sediment in vomited matter, recognizable by the guaiacum test. In the absence of vomiting, it may be demonstrated by the benzenide test applied to the feces, provided no meat has been included in the diet.

Miscellany

CONDUCTED BY ARTHUR C. JACOBSON, M. D.

A Medical Miracle.

During the summer of 1913 the writer was consulted by the wife of the Reverend Mr. Hunter because of a supposedly grave nervous affliction. The lady was an apparition of beauty and blooming health, but gave a rather alarming history of pelvic troubles and of vague nervous disturbances. Examination of the pelvis was negative, however, and as the study of the case progressed the conviction was more and more borne in upon the writer that he had to deal with a simple hystero-neurasthenic. The lady's household and friends were convinced of the gravity of her ailments. With what demoralizing results this state of affairs was attended the reader can readily imagine.

The clerical gentleman joined in wedlock with this not unfamiliar type of patient himself presented anything but an appearance of robustness. He was an exceedingly thin, nervous, ascetic person, thoroughly imbued with the kind of theology that has made men foolish enough to absorb it miserable indeed. Hell and damnation preoccupied this zealous cleric's thoughts and he was narrow, intolerant and bigoted to a degree. The writer was deeply impressed by this trend of the clergyman's mind upon the occasion of a sermon which he happened to hear him deliver. In conversation he displayed his theological obsessions persistently and disagreeably. In short, he was thoroughly qualified to drive the souls whose salvation he fanatically sought away from the church.

To a medical man the problem soon resolved itself into its proper elements. The cleric was the actual patient, upon whose cure the nervous well-being of the wife depended, for a more trying person to live with than this sick servant of God could not be easily imagined.

The real patient, then, was persuaded to submit to treatment. This was wholly dietetic, and consisted in fattening him up, on the theory that by making a Fallstaff of him the Savonarola would be translated.

He was amenable to the therapeutic programme, for he cherished a desire to become stout, not an uncommon vanity in men of unimpressive build. He would look better in the pulpit and loom up to better advantage in all his dealings with his fellow beings.

So he was easily induced to adopt forced feeding. Raw eggs, milk and large amounts of cream were added to his diet and he responded well. A pretty picture unfolded itself as the weeks went by, and the scale recorded phenomenal gains. At the end of six months there had been a gain of forty pounds and the man weighed in at 180. The gaunt six-footer was well on the way to Taftian proportions. Autointoxication was guarded against by careful attention to elimination, and only a few "bilious" disturbances ensued, at which times the diet was restricted.

Coincidentally with the gain in weight the man's temperament changed mightily. He became cheerful, even Rabelaisian in nature. In place of an Edwards a Beecher began to emerge. Life became a joy and some of the happiness of the hereafter was borrowed for use in the present. At the end of a year his parishioners began to realize that they had literally secured a new incumbent in the pulpit. Physical force, mental vigor and sweetness of temper

superseded weakness, acerbity and the old iron-clad grouch. A new theology was preached and in personal intercourse a delightful companion was discovered?

And what of the wife?

Well, the pelvic troubles disappeared and with them the secondary nervous phenomena.

For just as the parishioners found themselves with a new rector the wife had been equipped with a new husband.

On this last point it is not necessary to dilate. *Verb. sap.*

Moral: Diagnosis and therapeutics should often not stop short with the individual who consults us.

Two Good Books.

Huber's "A Doctor's Viewpoint."—This book should win a wide audience, written as it is in the most charming style of the distinguished author. It is a doctor's view of our human relations and of our civilization. It discusses sanely and wisely those medical matters which are sadly garbled by journalists and magazinists, while at the same time it excels such writing in literary charm, which is saying a good deal, for whatever we may think of the distortion of facts on the part of lay writers, we must concede that many of them are past-masters of the pen. While we have a Huber, the days of physicians possessed of literary gifts cannot be said to be numbered. It would be futile to attempt here an essay of the relative merits of the many papers which make up the volume. They must be read—will be read by the discriminating who are searching for that which is worth while among the avalanche of books. If the style is the man, readers will want to know Dr. Huber. A delightful acquaintance may be started by reading this book.

* * *

Kelly's "Some American Medical Botanists."—This biographical work traces charmingly the floral medical god-fathers of America. It is a fair garden into which the author leads us, in which we meet the men whose search for remedies was keen in days when malaria and dysentery ravaged whole towns and paralyzed industry. The book is a key to how and why our botanical resources became what they are. One will feel better acquainted with lobelia and all the other drugs of like derivation after a reading of this work. To Kelly, too, "there is religion in a flower," and one of the sources of "piety." Kelly laments that times have changed and that other interests seem to thrill the boys of to-day. In botanizing he discovered a "pure, sweet and refining passion," which apparently absorbs him still. Nowadays science is Rockefellerized, and our young men are to be found, not in the closet, identifying specimens, and in the fields on botanical excursions, but in dance laboratories, studying the new steps. The search for galenicals is ended and medicine is Carnegieized, yet no memorials are left behind by men more enduring than *Darlingtonia*, *Gardenia*, *Claytonia*, *Torreya*, *Mitchella*, *Wistaria*, *Sarracenia* and *Poinsettia*, reminiscent forever of the great American demigods of the healing art.

Quarantine.

We have no guaranty that the proposed taking over of the Quarantine Station at Rosebank by the United States Public Health Service will bring about the conditions projected by the present Health Officer. We have everything to gain by continuing present policies

and methods, and no justification for taking chances. The situation is a most serious one. We who are directly on the firing line of the "sanitary frontier" of the United States do not purpose to delegate responsibility to others. To shift it would be false economy. The saving of a few dollars would not outweigh vital sanitary considerations. New York is more concerned than any Washington bureau possibly could be, despite the high character of the Government service. A special situation exists here, since the brunt of European immigration falls upon us. We are uniquely placed. The attempt to abrogate sanitary home rule by bringing about a transfer of Quarantine to Federal bureaucrats is fatuous. New York's problems of this character are peculiar and best settled by itself. Standardization of the sort proposed is not scientific; it is Chinese. Are we going to surrender to the Mandarins?

"Prenatal Child Culture."

What eugenic snobberies are in store for the race! Think of the possibilities in this wise of what is coming to be called prenatal child culture. Mothers are to cherish beautiful, kindly, happy thoughts and aspirations, and are to pray that their little ones may be lovely, pure and good. They are being taught that if they do these things success will surely follow. It is within their vital, mental and spiritual powers to implant noble talents and tendencies.

All very well, but the trouble will be that commonplace or worse than commonplace children thus born will have all the virtues ascribed to them and grow up little prigs.

But it all makes a new field for teachers of eugenic buncombe. There will be a legion of them shortly.

The Pig in the Pharmacy.

One of the most abominable practices of which a certain class of pharmacists is guilty is the wetting with saliva of capsules to facilitate joining the two halves. And it may readily be imagined that the men who do this are not too particular with respect to the cleanliness of their hands when manipulating drugs. The Department of Health would do well to pay some attention to such matters. The uses to which sinks are put in some pharmacies would bear inquiry. The methods of washing glasses in these places and in saloons also deserve consideration.

A New Disease.

We wish to call attention to a hitherto undescribed disease. It afflicts ministers and is only fatal to their usefulness as such. The reader will therefore have to decide for himself as to whether it is a social asset or liability. We say "only fatal to their usefulness," as it probably prolongs life.

An energetic minister takes hold of a parish, preaches eloquently and works assiduously for two or three years, and then contracts a marriage with a wealthy young woman, usually a member of the congregation, who, like himself, has social vision, the will to uplift, etc., etc. He preaches and works for another year, and then has a "breakdown." He resigns and goes to France to rest and recover his shattered health, after making an announcement that the church has limited his sociological horizon and usefulness and that he must seek broader fields, after recuperation.

It is a very strange disease and of much clinical interest. It is not believed to be curable, and the

victims ultimately are forced to distract themselves by collecting armor or in some similar way endeavor to mitigate their distresses.

The Eugenic Value of War.

The governmental machinery that eugenists would build up for the regulation of marriage and births may some day operate to veto both in those border-line cases with which we would not now think of dealing, as well as in those clearly defined. In the meantime the great war serves a eugenic purpose in a crude way. A good deal of rot is heard anent the killing off of the "best" men in battle. Why "best" men, necessarily? Why place such a high value upon the common soldier or sailor who in time of peace is socially ostracized? Why put such a high rating upon those who, like silly sheep, can be induced to fight their fellow men at the behest of quarreling rulers? Why is a military serf a eugenic asset? Why do we insist that the cowardice which makes it easier to enlist for war than to refuse to fight is courage? From one point of view war has a certain eugenic value, as had the Crusades, in that vastly more riff-raff is killed off than is really good blood. Look at the pictures of the common soldier of any of the European armies and say whether the world is being deprived of its best blood. An enlightened people would never engage in war; would not need it as a crude eugenic measure, for they would have advanced beyond that kind of a eugenic necessity. In the present state of "civilization" it appears still to be necessary, sad to say. The greatest social progress cannot be attained through war even now, though this fact does not appear to be conceded by many. War is still necessary simply because of stupidity, or group feeble-mindedness, and because our society cannot attain eugenic benefits in any other way; cannot measure up to the high requirements. If we are so uncivilized that war is still possible and needful, why lament the "sacrifices"? In any case, the percentage killed of those engaged is small. It is the ignorance and moral degradation of those who constitute the masses that make armies practicable. Why ascribe to the European hordes who are said to leave behind them on the air for days, when on the march, a stench like that of a badly kept zoo, all the eugenic virtues? Faugh! What army is not constituted of Huns?

War to-day; eugenics next; last, and best of all, natural selection practised by a highly civilized peoples under decent economic conditions and a rational social order—the dream of Alfred Russel Wallace.

A Common Experience.

A waggish friend was recently approached by one of those naive gentlemen who propose an abortion with the utmost lack of *savoir-faire*. Our friend maliciously led him on. How much would he pay for the operation? Oh, any price. Well, suppose anything went wrong? Suppose the lady died? Why, said the gentleman, nobody but you and I would know about it.

Surely we note curious revelations of character and mentality—and of moral sense, or nonsense.

Common Horse Troughs Abolished.

The prevalence of glanders in New York necessitated an order for the abolition of common horse troughs and the substitution of drinking fountains having a system of water supply which requires the use of individual pails.

Medical Editorial Table

The Health of Our Summer Resorts.

One of the great drawbacks to our summer resorts is the danger of typhoid contamination and many a beautiful place has been ruined as the result of a typhoid epidemic. Therefore the following comment from the *Journal A. M. A.* is welcome, as it shows that summer places are becoming alive to their necessities:

"Many of our summer resorts have acted on the policy that a good climate, charm of location and beauty of scenery are sufficient inducements to attract the summer visitor; but nowadays people are more wary and wisely look for more than this before selecting a vacation playground. The visitor wants a clean bill of health from the resort he has chosen, and is entitled to have one. Vacation typhoid is becoming known as a serious hazard. The prudent recreation seeker now finds out in advance whether or not this infection prevails at the place he has in mind, and furthermore learns what sanitary measures are being taken there to safeguard the health of the summer colony. The town of York, Maine, has recently taken steps that at once place it in the forefront of progress as far as health is concerned. The way the problem was met may well serve as a model for other summer resorts.

"Last year there were a number of cases of typhoid fever at York. No attempt was made to conceal the fact of the existence of the disease and its extent. The authorities very properly felt that the way to meet any danger was to face it in the open. An expert was invited to come to York and make a sanitary survey. The chief recommendation of the expert was that York needed a full-time health officer. The town appropriated \$2,500 a year for this purpose and appointed Mr. William Eustis Brown, a graduate of the School for Health Officers of Harvard Technology, to the newly created position. The town of York is now spending one dollar per capita per year for health, a larger sum than is appropriated by any other American city directly for a like purpose. "Public health is purchasable," the price is moderate, and York shows by its action that it intends to enjoy the best attainable protection from disease. Other summer colonies will find it to their advantage to follow the example of York, and take the necessary measures to safeguard their citizens and the strangers within their gates. People are now advised to demand the security of health that only a well-ordered sanitary department can furnish. Our seashore and mountain resorts can no longer depend on nature and luck for a clean bill of health."

A New Specialty in Medicine.

The *New York Medical Journal* brings out a new specialty. At first glance it would seem as if medicine were sufficiently specialized, but the study of the ductless glands has opened up such great possibilities that one can readily appreciate the necessity of the devotion of one's entire efforts to this line of endeavor the *Journal* has inaugurated.

"A new department, from the pen of Dr. Charles E. de M. Sajous, the acknowledged American pioneer and authority in this line of investigation. A series of articles will be devoted solely to the study of the functions of the ductless glands and the internal secretions and their bearings on disease and therapeutics. It is only of late years that we have come to any proper appreciation of the important part which the internal secretions play in health and disease. It is expected that by devoting adequate study to this department of medicine the physician will be enabled materially to increase his efficiency as a conservator of the health and sanity of his patients.

"While the subject will be treated in a scientific spirit, its application in diagnosis and in the practice of medicine will be brought prominently forward, since it is for the practising physician rather than for the laboratory expert that these articles are intended. There are a number and variety of conditions which can be understood and properly treated only after full comprehension of the endocrinous glands."

In this connection it may not be out of place to call attention to an article in the *Johns Hopkins Medical Bulletin* on "Complement Fixation in Thyroid Diseases," in which Dr. S. R. Miller observes that:

"The tendency in recent times to devise functional tests for the various glandular organs of the body has now come to embrace the so-called ductless glands. The frequency of thyroid conditions, and especially of states of hyperthyroidism, makes it desirable that functional tests for the activity of the thyroid

gland be available, especially for the diagnosis of border line cases. This need was called attention to by Dr. Barker in 1914; he mentioned that there were at that time four tests of this nature, namely, Reid Hunt's acetone test, tests for hyperadrenalinemia, Abderhalden's dialysis test, and finally the complement deviation test of Roseo. For numerous reasons it was decided to try out the last-named test. For the purpose of antigens various extracts were prepared from thyroid tissue removed at operation in case of Graves' disease. After submitting the various extracts to suitable titrations the sera of a number of patients suffering from Graves' disease, other thyroid conditions, unexplained tachycardias, dementia præcox, and known cases of lues, were submitted to complement deviation tests, according to the well-known method of the Wassermann reaction. The results in a series of cases were remarkably negative, even when each serum was tested against a total of 19 or 21 different antigens. No positive findings in any thyroid conditions were observed. The only sera which gave complement fixation were those from cases of known lues, which showed a positive Wassermann reaction as tested in the usual manner. Similar positive results were secured when spinal fluids from cases of general paresis were employed. It would seem, therefore, that the test of Roseo is of no clinical value in the diagnosis of thyroid conditions."

This and other matters of similar import will be discussed by Dr. Sayous.

Fee Splitting.

A writer in the *Journal of the Indiana Medical Association* tells of his experience with a surgeon who has a reputation for fair dealing. After operating on a case the family is told by the surgeon to pay the physician first and him afterward. The surgeon treats the referring physician as a consultant and all are satisfied. The writer says that "what I want to be shown is ordinary decency and professional courtesy. As to the matter of fee, I will take care of that, but I want the surgeon to recognize that fact that if he is entitled to a fee, so am I, and he should consider the conditions in a manner that will make it possible for me to receive adequate compensation and still maintain my self respect."

Commenting on this the *Journal* says:

"We are unalterably opposed to fee-division under any guise and for the reason that it is demoralizing to our profession and in the end injurious to the public. The iniquity of the whole thing is recognized by the fee-splitting surgeons themselves, but they apparently have not the courage of their convictions and prefer to let the ultimate outcome be what it may. But that the conduct of all non-fee-splitting surgeons is irreproachable is not true, and if ever we finally and effectually settle the fee-splitting question there must be a revival of the spirit of fair play as exemplified in a recognition of the rights of others and especially the professional courtesy and mutual helpfulness which should be shown one physician by another. The conscientious general physician does not ask, nor does he desire that his fee shall be either charged or collected by the surgeon, but he does ask for the privilege of not only charging but collecting his fee without being handicapped by the greed of the surgeon who often pays no attention to anything but his own selfish interests. Furthermore, the general physician wants and deserves a little more of that spirit of professional courtesy and mutual helpfulness which is his due, and which if exerted will go a long way toward righting some of the commercial tendencies about which we now complain, as it will also improve those fraternal relations which in the end are our bulwark of safety and progress."

The tenets of the American College of Surgeons will go far toward putting an end to the iniquities of the fee-splitting evil.

Joining the County Society.

In another column we have strongly urged every physician to affiliate with the County, State and National medical organizations. In this connection this editorial comment from the *Ohio State Medical Journal* is refreshing:

"There are no creeds in modern medicine. The Summit County Society has proof of this statement in its roster. Sixty-nine per cent. of the homeopathic physicians in the county are members; eighty-three per cent. of the eclectic men are members; and ninety-two per cent. of all doctors are affiliated with the society. When men of varied creeds and doctrines, diverse

opinions and ideas, meet in the melting pot of the county society they come forth better men, better physicians, imbued with the high ideals of organized medicine. In their work of healing the sick they use the drug method that seems best adapted, whether it be homeopathic, eclectic or allopathic; their sincere desires and their utmost efforts are concentrated on that one great object, healing the sick and wounded, which is the sublime attainment of the doctor. * * *

"Every physician in Paulding County is a member of the society. While this statement is striking, and the condition in Paulding is wholly commendable, the point we want to emphasize is why every man in the county joined the society. A few of the members called personally on the non-members and invited them to join. The men obtained in this way are now active, interested members. We have observed that whenever a society has broken a record, or has accomplished a specially effective work in any line of organization advancement, it has been through personal work."

It would be a wonderful thing for the medical profession if the physicians of every county in this country would emulate the examples of their Ohio confreres. Personal effort plus a realization of the necessities will go far toward realizing this hope. Why should not physicians of the three schools belong to the same county society? "Are we not men and brothers?"

Public Conscience and Public Charities.

The poor and the insane, it would seem, are ever with us. The conditions of the poor are being carefully studied and some day, we hope, we shall learn how abject poverty, at least, can be obviated. But we are doing less with the insane. In certain instances psychiatric institutes are studying the problem, but the effort is not sufficiently widespread.

The *Lancet-Clinic* well expresses the situation:

"The insane in custody in the United States number more than 200,000 to-day, and 40 per cent. of the total State budget in some of the States is expended in custody that is wholly pessimistic of research for prevention or cure. The State accepts the responsibility and expense of custody, but is wholly negligent of the opportunity and obvious economic indication of supporting efficient, protracted and intensive research into causes, preventive measures and cures of this terrible condition.

"There is need of a new public conscience in the matter of the so-called public charities, but before that public conscience can become potent there must be public education in the conditions of the insane of which the medical profession itself is now ignorant. How alert, keen and aggressive the public conscience in this country is when once aroused can be seen in the tuberculosis movement, a somewhat overworked field of institutional activity, but one which has been vastly influential in public education in medical affairs. Every State should support as an economic proposition and in connection with its State University or its educational system, a laboratory of psychiatric research, and this laboratory should have its officers selected by some method that would secure the best trained and most efficient physicists, chemists and pathologists. This laboratory should be an integral part of the university and show the optimistic spirit and vision of scholarship and erudition."

A significant fact is that a considerable percentage of our insane were born abroad. Does this suggest still another reason for a restricted immigration?

The Mouth and Disease.

When in doubt as to the etiology of an obscure condition critically examine the mouth. The *Therapeutic Gazette* wisely urges that closer attention be paid the mouth and teeth.

"We are now on the look out for septic foci, and in a very large proportion of cases find them about the teeth, in the form of a pyorrhea alveolaris, and sometimes in the tonsils. From these two centers of infection micro-organisms gain access to the circulation or to the lymph channels, and, being carried to other parts of the body, induce arthritis, infections of the kidney and bladder, of the endocardium, and sometimes of the pleura.

"Not only may general systemic infection arise from these causes, but the swallowing of germ-laden saliva, or food so contaminated, results in an infectious catarrh of the stomach and intestines and possibly induces inflammatory changes in the mucous membrane of the common bile duct and finally of the gall-bladder. It is of vital importance, therefore, that in investigating an obscure case of fever and arthritis the condi-

tion of the oral cavity be carefully looked into, that the dental surgeon shall be called in consultation to discover and remove the foci of infection, and that the expert with the x-rays shall also be asked to aid in the discovery of a possible cause of illness.

"Under these circumstances the tooth should be removed, or its surrounding tissues so treated that, with the aid of antiseptic applications, free drainage may be obtained. It not infrequently happens that septic foci about the teeth produce no general or local symptoms until by some illness or other cause the patient's vital resistance becomes impaired, and then the micro-organisms which have been lurking about the roots of the teeth are able to induce severe illness."

From present indications the use of emetin hydrochloride will aid materially in lessening if not curing the inroads of pyorrhea and its hosts of attendant evils.

When in doubt examine the mouth.

Public Health

New Sanitary Code Rules.

Among the new sections which have been added to the Sanitary Code of the City of New York are provisions requiring the naming of ingredients of patent medicines on the labels, or the registration of the ingredients with the Board of Health:

Requiring institutions and private physicians to report cases of venereal diseases; Requiring hospitals and private practitioners to report occupational diseases and injuries; Prohibiting persons who are suffering from communicable diseases from working in their homes upon articles intended for general consumption; Prohibiting the distribution of free samples of proprietary medicines or other substances of an alleged medicinal or curative character intended for internal human use; Providing that persons ill with communicable disease may not handle or sell food; Providing for decent and clean conditions in food manufactories, hotel and restaurant kitchens and retail food stores; Providing for the physical examination of children at the time of entering public school; Requiring the lessees or owners of marsh lands and sunken lots to fill in or drain the same or to employ such other methods as will prevent the breeding of mosquitoes; Providing for the sanitation of passenger cars and omnibuses; Regulating public laundries; Prohibiting offensive and dangerous practices in the manufacture of cigars and cigarettes; Requiring the removal of harmful dust, gases and other impurities from work rooms by suction devices; Prohibiting the sale of bichloride of mercury except upon a physician's prescription; Prohibiting unmuzzled dogs in streets and other public places; Prohibiting the use of wood alcohol in preparations intended for human use; Prohibiting the sale of opium, morphine, and other habit-forming drugs except on the written prescription of a physician; Prohibiting the common use of forks at free lunch counters.

Health Instruction in an Indiana County.

The county health commissioner of Union County, Indiana, feels that one of his duties is to teach the people of the county how to keep well. He has accordingly prepared a little seventy-five page pamphlet made up largely of material published by various State boards of health. The board of county commissioners made an appropriation to send a complimentary copy to every home in the country. The pamphlet is simply but forcibly written, and contains chapters on the home, contagious diseases and the baby. In the first chapter, the people are told how to keep their homes clean and healthful, how to dispose of their garbage, how to care

for their food and how to take care of their bodies. Directions for disinfection and especially directions for various contagious diseases make up the second chapter, while the third and most important contains directions to mothers for the care of themselves and their children. We have been a long time in learning that if the teacher of good health would compete with the patent-medicine man, he must meet him on his own ground. Instruction of the people on health topics is a public duty. It should not be left to professional zeal or to philanthropy. "The publication and distribution of such pamphlets as the Union County Health Book," says *The Journal A. M. A.*, "are directly and solely for the public good and will yield large dividends in the form of better health and prosperity for the people. If each county in the nation had a health officer as wide awake and a board of commissioners as broad-minded as has Union County, Indiana, the problem of preventing disease and prolonging life would be immensely simplified."

The Health of New York.

The number of deaths reported during the year 1914 was 74,803, making a rate of 13.40 per 1,000 of the population. This is the lowest death rate ever recorded in the City of New York. Comparing this with last year's record, namely, 73,902 deaths and a rate of 13.76 for the year 1913, we find that there has been a decrease in the death rate of .36 of a point. How much this means to the community may perhaps be better appreciated by saying that if the death rate of 1913 had prevailed during the past year, there would have been 2,010 more deaths than actually occurred, says the Board of Health of New York.

The most noteworthy feature of the decreased mortality was the record-breaking infant death rate of 94.6 per 1,000 children born. This is the lowest infant death rate ever attained in the City of New York, and the lowest of any large city in this country. The infant death rate in 1913 was 102, which was the lowest rate in the city up to that year, so that the decrease this year in the rate over last year is a little over 6 per cent.

Causes of Death in New York.

The following causes of death in 1914 showed a considerably decreased mortality: typhoid fever, measles, scarlet fever, all forms of acute respiratory diseases and diarrhoeal diseases under five years of age. There were 10,286 deaths from all forms of tuberculosis as against 10,031 deaths in 1913. The slight increase in the absolute figures, however, is more than accounted for by the increase in population, so that there is actually a slight decrease in the rate per 1,000 of the population. There were 16,804 deaths from the combined causes of organic heart, kidney and brain diseases as against 16,194 in 1913, an increase of 610 deaths.

The number of deaths from cancer was 4,463, an increase of 240 over the figure of last year; 4,516 infants died from congenital causes, such as malformations, marasmus, pre-maturity, etc.; 4,982 people met with violent deaths; the death rate from purely accidental deaths decreased somewhat, whilst that from suicides increased considerably, there having been 915 deaths reported from this cause; 13,312 children died before completion of the first year of life and 19,518 before completion of the fifth year. There were 41,235 deaths of males as against 33,568 deaths of females.

Vesical calculus is extremely rare in females as compared with males.

The American Association of Clinical Research

JAMES KRAUSS, M. D., Permanent Secretary and Editor.

Difficulties of Clinical Research.

The idea of clinical research has entered into the consciousness of a large part of the medical profession, but basic difficulties arise from a misunderstanding of the real essence of observations, experiments, and research procedures.

Observation is the basic element of investigations, clinical and laboratory, and observational investigations, contrary to the general notions and practices of the day, naturally have no hypothesis for their basis. As soon as a hypothesis enters into an observational investigation, the investigation loses its character and becomes observational proof.

Experiment, on the other hand, depends, for its basis, on a hypothesis. Without a hypothesis, there is

no experiment. The experiment puts the hypothesis to the test; makes the necessary conditions, and the resulting phenomena prove or disprove the validity of the hypothesis. The experimental attack is based on the hypothesis. The experimental procedure is likewise based on the hypothesis. Experiment is the basic element of proof.

Nevertheless, we are given continually as research procedures what are at best only experimental procedures. It ought to be plain that research is reinvestigation, that reinvestigation implies the investigation of matters already investigated, that investigation is mainly observational without hypothesis, while proof is mainly experimental with hypothesis.

JAMES KRAUSS, M.D.

EXPERIENCES WITH COLLOIDAL METALS IN THE TREATMENT OF ACUTE CARDIAC INFECTIONS.*

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Brooklyn, N. Y.

The colloidal preparations of the precious metals, gold, silver and platinum, have lately gained a certain amount of vogue not only in experimental pharmacology but in diagnosis and therapeutics as well. Since their introduction a number of years ago, the colloidal metals have been experimented with in a variety of diseases, and found particularly useful in certain acute infections, as pneumonia, septicemia, pyemia, tonsillitis, arthritis, etc. The literature, especially of French origin, on the application of colloidal silver in diseased conditions is quite extensive. The utility of this therapeutic agent has in recent years become so well established that in some cases the use of the drug has become quite universal. Practically every physician in the course of his general practice has made use in the treatment of puerperal fever or other infections of at least one of the silver preparations, Unguentum Crede.

It has been the privilege of the author also to avail himself frequently of colloidal silver, but with variable results. In some of his cases its usefulness was apparently nil; in others, the favorable results, if at all obtained, seemed to be attributable more to the additional curative measures employed rather than to the silver colloid itself; only in a small percentage of cases was the benefit of the drug beyond doubt.

For the three-fold purpose of (a) giving the drugs a satisfactory trial, (b) determining the usefulness of colloidal preparations in a variety of infections (pneumonia, tonsillitis, tuberculosis, etc.), and more particularly (c) testing the efficacy of these drugs in cardiac complications of joint diseases, the writer has utilized certain favorable opportunities lately afforded to him to experiment with the colloids.

ACUTE ENDOCARDITIS.

The successful treatment of acute endocarditis, even in our days of modern progressive medicine, is often a problem taxing the most experienced practitioner and

scientist. The reasons are numerous and not difficult to explain. Many obstacles not found in dealing with other diseased organs are encountered in the treatment of cardiac diseases. The application here of such rational therapeutic measures, which in the treatment of other organs are practical and even universal, is often impossible. Absolute rest, for instance, has long ago been accorded just recognition as the most essential requisite in the restoration of any diseased organ to its normal state; and yet, in the treatment of heart diseases, it can only be applied to a limited extent. Absolute rest of the heart is an impossibility. Upon its functioning the blood supply of every other organ depends. Its uninterrupted activity is essential for the maintenance of life. Even a momentary disarrangement of its normal functioning may be immediately followed by serious consequences. All that may be hoped for, and all that we must content ourselves with, is relative rest, accomplished by decreasing the number of heart contractions. The above illustration is only one example illustrating the obstacles in the treatment of endocarditis. There are numerous others. Similar difficulties are further encountered in the application of ordinary hygienic, dietetic and hydrotherapeutic measures, which are just as essential for cure as is rest. Hence, the scope of these remedial agencies is necessarily limited; and their usefulness consequently not as complete as in the treatment of diseases of other organs. Recourse therefore is taken to therapeutic agencies other than those just mentioned.

The large number of drugs tried out in endocardial diseases is in itself an indication of failure as curative agents. Of the numerous remedial agents employed, some have proven of doubtful value, while others decidedly harmful. The extensive use of salicylates in their various forms is too well known to need discussion; their value, in spite of their universal use, is still a matter of serious doubt. It is perhaps true, that in a certain number of cases the salicylates exercise some beneficial action upon the course of the disease; but it must also be admitted that in the greater majority these drugs either are totally useless or inert, if not even harmful. The same may be said of numerous other "remedies," the alkalies, iodides, coal tar preparations, diploal, antipyrin, etc., which are in common use in rheumatic and other forms of endocarditis.

SERA VACCINE.

Because of the failure to relieve those afflicted with acute endocarditis by the above-mentioned methods,

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other means of treatment had to be resorted to. Hence, various vaccines and anti-bacterial sera have found their way into the therapeutic field of acute endocarditis, simple and septic. This mode of treatment is unquestionably an ideal one, but unfortunately it is connected with many difficulties at present apparently unsurmountable, so that in quite a number of instances it is as yet impractical. In the first place, the variety of bacteria affecting the joints or the endocardium is very great. The infection of the above-mentioned organs is not limited to that of the micrococcus rheumaticus of Pointon and Paine, but is caused also by various others: the streptococcus viridans, bacterium Welchii, streptococci, pneumococci, micrococcus pyogenes and a veritable host of others. Sahli contends, and perhaps rightly, that in many cases the rheumatic affection of the endocardium is due to an attenuated pyogenic organism and not to a specific bacterium. Singer, on the other hand, claims to have isolated a specific organism, related to or identical with the staphylococcus pyogenus aureus.

In addition to the difficulties presented by the great variety of causative bacteria, the treatment of acute endocarditis with antitoxins is still further complicated by the fact that many of these bacteria have each numerous occurrent strains. Rosenow has studied a number of bacteria and their strains, and found that while the latter may retain their identity with the parent bacterium, as in the case of the streptococcus, yet they possess different features, exhibit varying virulences, have specific cultural characteristics, and show singular affinities for particular organs.

The difficulty in the serological treatment of endocarditis, caused by numerous organisms and their variable strains, is therefore obvious. The preparation of a specific antigen to counteract the poisonous effects of the bacterium or its toxins is extremely difficult, unless the infecting micro-organism can be isolated in a pure state, either from the point of primary infection or the general circulation. If we are fortunate enough to obtain a pure culture and an active antigen, we may then hope for some success in the treatment of the particular case, but in no other way. The preparation of an autogenous antigen, if the source of infection is known, is not difficult. A culture may be obtained from the infected area. Numerous instances of beneficial treatment with such antisera are on record. Pierra described lately a case of acute mitral disease complicating an arthritis cured by the administration of an antitoxin prepared from bacteria isolated from the scrapings of an infected post-abortive uterus. Abrahams cites a case of acute endocarditis proved by cultures obtained from the general circulation to have been caused by the streptococcus viridans. Here an autoserum produced a cure with subsidence of all symptoms in three days. Numerous other similar instances are on record. But, unfortunately, it is not always possible to isolate the bacteria causing the infection, for even in the most severe cases of septic endocarditis culture smears obtained from the general circulation of the patient sometimes remain sterile, and the preparation of an antigen is thus rendered impossible. In other cases, the seat of primary infection may be inaccessible to bacteriological investigation, as, for instance, a diseased gall bladder, infected biliary tracts, gastro-intestinal ulcers, fistulae, etc. On the other hand, there are also more accessible places of infection, as the tonsils, carious teeth, infected nasal sinuses, pyorrhea alveolaris, gonorrheal or other inflammatory processes of the prostate, urethra and fallopian tubes, various ulcers, skin eruptions, etc.

Another difficulty is presented by the necessity of

preparing an antigen from the particular strain causing the infection. Even the micrococcus of Pointon and Paine, which is supposed to be a common cause of endocarditis, has been shown to undergo a transformation from a diplococcus with an affinity for joints to a streptococcus obtained in artificial media. Every strain has different qualifications, produces different toxins and demands specific antitoxins to counteract its effects. The substitution of heterogenous for autogenous vaccines, whether monovalent or polyvalent, does not give the desired results. Rosenow strongly emphasizes the necessity of an autogenous vaccine instead of a heterogenous for the successful treatment of acute endocarditis with antisera. In my experiences these heterogenous antisera have proven useless, and I can report nothing but failures in their application.

Antiseptic drugs have also been employed, but with negligible benefit. Their dilution in the great volume of bodily fluids minimizes their action, while if administered in doses large enough to have any effect, the drugs become disastrous to the organism itself.

COLLOIDAL METALS.

The metal colloids have lately come into vogue in acute inflammation of the heart. It is a known fact that the processes by which bacteria and their toxins or antitoxins effect the bodily tissues are of a physiochemical nature. Nearly all tissues, foods, bacteria, toxins, etc., engaged in the numerous reactions of the various processes of metabolism, both physiological and pathological, are colloids. These colloids take part in all normal and abnormal functions of life, while the crystalloids play a minor role in the organism. It is reasonable to assume, therefore, that the colloids have a closer relationship to and stronger attraction for tissue cells than have crystalloids. Also, that the introduction into the organism of a colloid substance with the property of destroying bacteria or at least of neutralizing their harmful toxins induces a reaction similar to that of the natural colloids of the organism, i. e., the protective ferments of the organism which normally exercise a destructive effect upon invading bacteria and their toxins. Such an assumption seems logical. Hence drugs which destroy bacteria or neutralize their toxic products without injuring the tissue cells are as near ideal as may be hoped for. The colloid metal preparations seem to possess properties very similar to those just mentioned and actions resembling the natural protective ferments of the body.

The metal colloids are fluids, in which a metal with therapeutic properties is retained in a state of suspension and not of physical solution. The particles of the suspended solid are extremely small, ultramicroscopic, one cubic millimeter being estimated as containing about a billion of such particles. The latter are in a state of Brownian motion. The stability of a colloid drug depends upon the nature of the metal, the liquid retaining it in suspension, and the site of the suspended particles. According to the method of production, colloid drugs are of two varieties, the chemical and the electrolytical. The chemical variety is the result of a slow reduction in a liquid of one metal by another—a reducing agent (silver nitrate, iron sulphate and sodium citrate). The product of such chemical reaction is a somewhat turbid fluid, which does not retain its homogeneity as well as the one obtained by the other, the electrolytic process. It is also charged with less potentiality. The biological effect of a colloid substance, and hence its therapeutic value, depends upon the above-mentioned properties, i. e., the minuteness of the particles, the purity of the suspended globules; the homogeneity of the fluid, the potential charge, etc.

The electrolytic colloid preparations are obtained by passing an electric arc between two electrodes of a metal in a medium of distilled water. The resulting fluid is brownish in color; the suspended particles are very fine and strongly charged with electricity. The substance has considerable catalytic power, a property of great bearing upon the usefulness of the drug. As a catalytic agent, it may, by its mere presence, induce stronger activity among chemical substances undergoing a reaction and bring about results out of all proportions to the qualifications and characteristics of the agencies involved under ordinary circumstances, in the absence of the catalyzer. The beneficial effects of colloid preparations upon the animal organism are (1st) their catalytic power, fortifying the tissue in the manner of protective ferments and helping the latter in the destruction of invading bacteria; (2nd) their causation of a hyperleucocytosis with its usual beneficial effect upon the infected organism; (3rd) their decided augmentation of the normal metabolic processes within the organism of the individual, as proven by the increased nitrogen quotient of the individual's excretions; (4th) the mode of action not being caustic, they cause no toxic effects upon the organism and do not injure the tissue cells.

EFFECTS OF COLLOID-METAL TREATMENT.

In view of the above-mentioned properties, the colloid silver preparations were given a trial in my series of experiments. This series numbers seventy-eight cases, twenty-one of which were affected with articular inflammation, either single or multiple, and etiologically of various origin; the majority were rheumatic; the minority included gonorrheal, tubercular, septic and others. These cases were not complicated by demonstrable heart lesions. Most of them were attended with high temperature and marked subjective symptoms. The benefit of the method of treatment with colloidal metals in the great majority of these cases was unquestionably a substantial one.

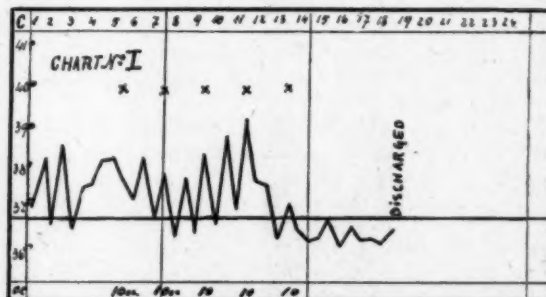
The injections had a decided effect upon the temperature, the severity of the rheumatic inflammation and the course of the disease. The gonorrheal and tubercular cases did not respond as readily to the treatment as the rheumatic; yet their course, usually a protracted one under any method of cure, was distinctly shortened; their recovery considerably hastened, the function of the organs sooner restored.

Colloidal silver in the form of electrargol was used practically in all cases of this series; only in a few were colloidal gold and copper employed, but with no special advantages over those of silver. The electrargol was generally administered intravenously, in doses from 5 to 15cc., according to the severity of the case, the weight and general status of the patient, and the reaction caused by the first injection. In a considerable percentage of cases the drug was used also intramuscularly, especially in those refusing venepuncture, or where the latter was difficult to perform; in a few others, per rectum, in doses of 50cc. The intravenous injections were administered under the usual aseptic precautions and were attended by neither pain nor discomfort; nor were the intramuscular injections troublesome. In no case was suppuration or any other complication observed from the latter method of application. The frequency of the injections was determined by the reactions the latter produced, and by the effect upon the disease in the individual case; it varied from one to four and five days. Reactions, following within a half of an hour after the injections, were evident in most of the cases and were represented by a mild chill and a slight elevation of temperature, ranging from a few tenths to one degree C. Only in

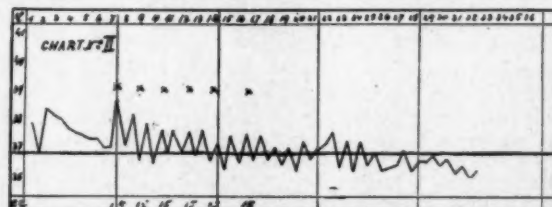
a very few instances were the reactions rather severe; in these there was an appreciable chill, elevation of temperature, lassitude and more or less prostration. In one case particularly, in that of a young girl with a very extensive mitral stenosis and insufficiency, was the reaction after each injection so extreme that this method of treatment had to be discontinued. There was no evident basis on which to explain the peculiar idiosyncrasy of this patient.

To demonstrate the results of colloidal silver treatment, it seems proper to recite a few of the cases treated, giving a short extract of the history and the results obtained; however, to describe all cases would seem superfluous.

CASE 1. *Polyarthrititis Rheumatica Acuta without complications.*—V. F. M. Male, 25 years. Tailor. First attack of polyarthrititis. Considerable swelling, pain and tenderness of right ankle, left wrist and both knees; indefinite pains in the other large joints. The knees distinctly fluctuating. History negative as to lues, gonorrhea or other infections. Habits good. Culture from punctured knee negative. Urethral specimen, no gonococci; heart, lungs and kidneys normal. Temperature ranging from 37 C. to 39.5 C., with daily remissions of 7, 5 to 2 C. First four days was given aspirin O, 5 gr. four times daily without results. Electrargol then injected 10cc. every other day. Five injections, after which complete reduction of temperature, disappearance of pains and subsidence of swelling. The left knee still tender and somewhat swollen for another week, when patient had improved perfectly and was discharged.



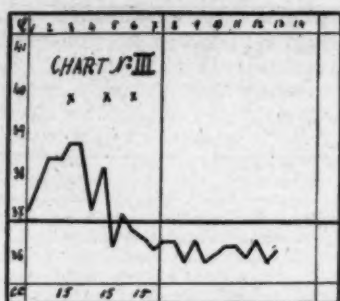
CASE 2. *Arthritis Gonorrhoica.*—N. K. Male, 32 years. Butcher. Left knee joint, swelling and severe tenderness, also pain and tenderness in the right heel. Had gonorrheal urethritis ten months previously. Prostatic expression contains gonococci. First injection 15cc. intravenously on the seventh day of admission to hospital. Then every other day, six injections in all. Temperature and subjective symptoms subside. The joint was continued to be treated with hot air and mercurial inunctions for two more weeks. Also installations of silver nitrate into posterior urethra. Discharged cured.



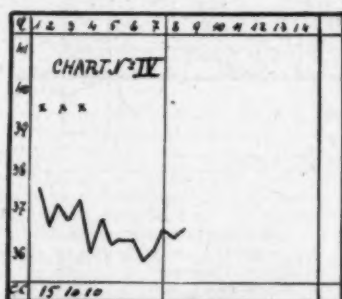
CASE 3. *Polyarthrititis without complications.*—K. N. Female, 24 years. Servant. Arthritis of the right knee and right wrist. Three injections of 15cc. electrargol; intramuscularly; cessation of temperature with disappearance of all symptoms. Discharged cured.

CASE 4. *Polyarthrititis without complications.*—O. M. Male, 21 years. Driver. Joints affected—left shoulder and right elbow. Three injections, one intravenous 15cc., two intramuscular 10cc. Complete recovery with perfect function of joints affected.

The number of cardiac cases, either primary or secondary to disease of other organs included in this series was 37. The infections included numerous old and fresh lesions of the heart. The lesions involved

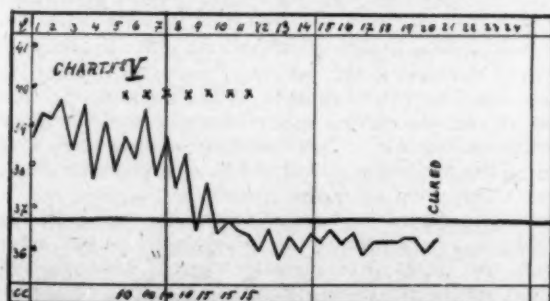


the mitral valves in most cases, but in a number the aorta was also the place of infection. Endocarditis was complicated in a number of instances by pericarditis and myocarditis. The diseases complicating the heart lesions included purpura, typhoid, pregnancy, chorea, multiple neuritis, abscesses, pneumonic infection, etc., but in greater preponderance were joint affections.



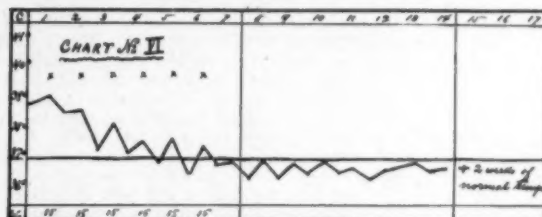
A most distressing symptom of acute endocarditis is undoubtedly the protracted fever. It is a problem not to be disregarded, not only in cases of septic endocarditis, but even simple. The general methods of combating this troublesome symptom are usually of no avail. "Feeding the fever," as Graves advises, is not sufficient. Antipyretics are positively contraindicated. Hydro-therapeutic measures, though safer, at most have but temporary benefit and give insufficient relief. The colloidal silver injections have helped greatly in combating the protracted fever of these cases, as may be observed from the appended charts of the histories of the following illustrative cases:

CASE 5. *Polyarthritides Rheumatica, Endocarditis Acuta*.—A. H. Male, 21 years. Laborer, single. First attack of acute arthritis, involving both knees and lasting six weeks, five years previously. Tonsillitis several times in the interval. Fever, pain and stiffness of both shoulders, later attacking also both knees. Temperature 39 to 40 C. Profuse sweating. Bacteriological examination of fluid from punctured left knee or blood negative. Lungs, kidneys and urethra negative. Heart, soft blowing systolic murmur at apex. Second pulmonic somewhat accentuated. Area of cardiac dullness slightly enlarged to left. Was treated at first with analgesics, codein, etc., to relieve the severe pain and other complaints, then silver colloid injections intra-

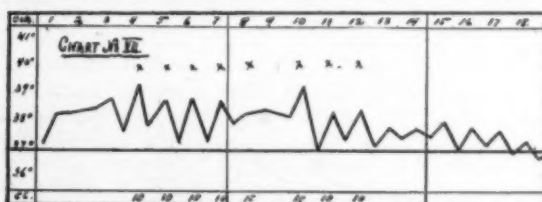


venously 10cc. four times and three more with 15cc. All subjective symptoms slowly subsided. On the twentieth day discharged cured; all heart abnormalities disappeared.

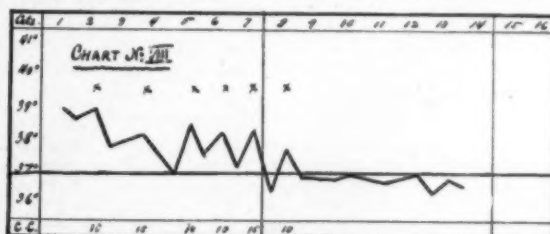
CASE 6. *Pericarditis, Acute Endocarditis and Polyarthritides*.—I. S. Male, 37 years. Mechanic. First attack. No history of previous scarlet, rheumatism or other etiological factors. The right shoulder and right elbow involved also minor inflammation of the left elbow and ankle. Distinct pericardial rub at the base of the heart; systolic murmur at the apex with mild accentuation of second pulmonic sound. Was given six injections 15cc. intravenously, after which temperature entirely disappeared. Ice bags and Ung. Crede inunctions as local applications to the precordium. Patient remained in hospital for two more weeks and was discharged, his heart and joints having resumed a very satisfactory state.



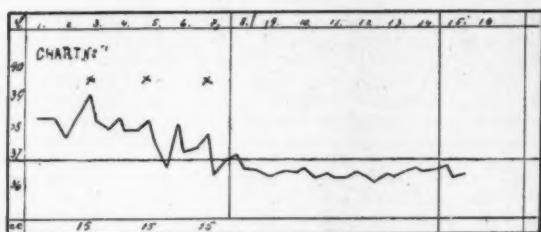
CASE 7. *Pericarditis, Polyarthritides Rheumatica*.—L. S. Male, 25 years. Laborer. Present attack began ten days previous to admission to hospital with swelling of both lower extremities, also left elbow and wrist and remittent temperature; great discomfort and sweating. Physical examination of the heart reveals a pronounced systolic rub at the base, superficial. Second pulmonic not accentuated. Received eight injections of 10cc. each into the gluteal muscles. Complete recovery.



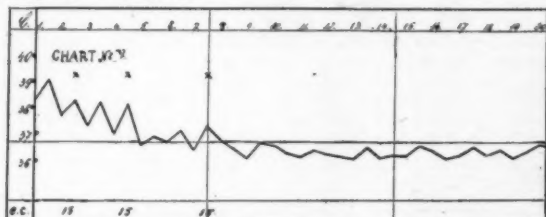
CASE 8. *Endocarditis Acuta Recurrens Insuff. Valvulae Semilunaris Aortae*.—M. R. Male, 22 years. Office attendant. Had repeated attacks of rheumatism, the last one three months previous to present illness, which affected mildly both knees and ankles, but which was accompanied by very marked dyspnea, fever and anemia. Examination shows enlargement of the heart, the apex three fingers to the left of the mamillary line in the sixth interspace, resistant, well defined. At apex, muffled first tone, diastolic murmur; second tone not audible. Pulsus celer, all peripheral vessels visibly pulsating. Liver tender, lower border not palpable. Spleen not enlarged. Urine albumin 0.1 per cent. Treatment: Ice bags, codein and bromides for extreme restlessness. At times morphine. Colloidal silver in the form of ointment for inunctions; electrargol 10cc. intravenously. Six injections. Rheumatism relieved; heart very much improved. Discharged on fourteenth day.



CASE 9. *Insuff. Valv. Mitralis Rheumat. Articularum*.—A. W. Female, 27 years. Servant. Family history negative; no previous attack. Three days ago taken with pain in left arm, right ankle; at present also involving right arm and left knee. Tenderness and sweating. Temperature 38-40 C.; pulse 96. Heart—Apex in fourth interspace, mamillary line. Systolic short murmur at apex; second pulmonic distinctly accentuated. Electrargol intramuscularly 15cc.; every second day three injections. Pain in joints subsides, pulse diminishes to 76. Patient discharged after ten days, improved.

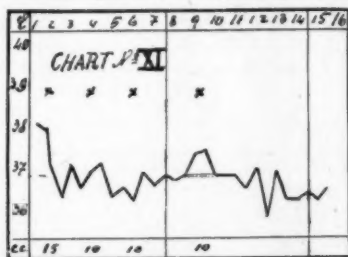


CASE 10. *Rheumat. Artic. Acuta. Endocarditis Recurrens.*—E. B. Female, 22 years. Servant. First attack three and one-half years ago of a number of joints with heart pains, palpitation shortness of breath and lasting two and one-half months. Recovered fully. Second attack one-half year ago; since then ailing with heart disturbances. Present illness began six days before admission (angina, high fever, etc.). Joints involved—right hip, left knee and both ankles; right one especially painful and swollen. Heart—Apex in fifth interspace, mamillary line, broad, indelined; right boundary, two centimeters to the right of the right sternal border; presystolic thrill, faint presystolic murmur; considerable dyspnea, cyanosis, rapid respiration. Electrargol three times at 15cc. intravenously. Temperature subsided and remained so for the next two weeks, when the heart resumed its state of compensation. Heart tonics during the latter period.

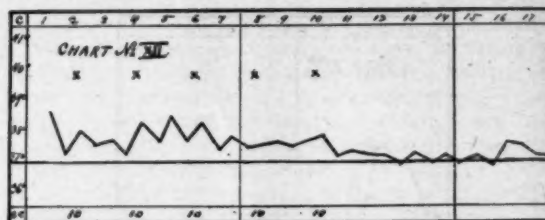


The following are a few examples of cases illustrating the action of the colloidal silver preparations in patients with heart disease, associated with so-called "rheumatic manifestations":

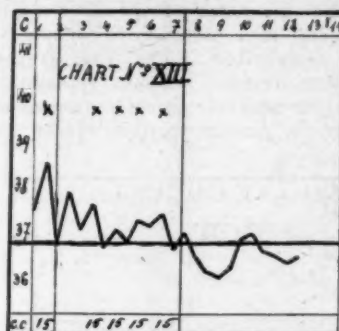
CASE 11. *Purpura Rheumatica. Insuff. Valv. Mitralis.*—M. Z. Male, 17 years. Paper hanger. First and similar attack lasting three weeks, one year ago. Present attack began six weeks previous to admission to hospital. Present symptoms—Pain and disturbance of function both knee joints. Fever, Petechial rash covering extensor surfaces of both lower and partially both upper extremities. Before admission was treated with aspirin 1 gr. t. i. d. No effect. Intravenous injections of 15cc. colloidal silver and followed by three intramuscular of 10cc. Temperature reduced within one week. All symptoms ameliorated. Discharged after fifteen days of treatment.



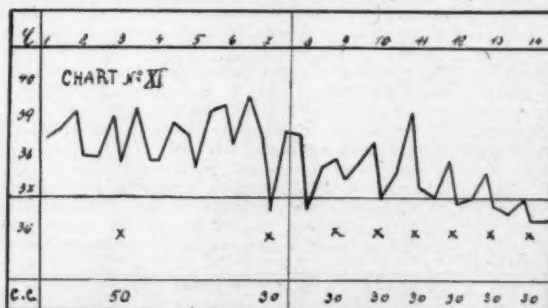
CASE 12. *Chorea Minor. Insuff. Valv. Mitralis, post-rheumatica.*—M. K. Girl, 12 years. One month ago had attack of palpitation of the heart and pains in right wrist. After one week's remission, the above symptoms were followed by choreiform movements, beginning with the right hand and extending to the left and ultimately to rest of body. Examination of the heart reveals definite evidences of mitral lesion; a systolic murmur at the apex, but more audible at the base; pulmonary accentuation of second sound enlargement of cardiac dullness. The previous history reveals several attacks of tonsillitis and so-called "growing pains." Lungs, kidneys, etc., normal. Treatment—Strict rest and hygienic measures. Electrargol five injections intramuscularly. Temperature subsides in ten days; was retained in hospital one month. Patient discharged when choreiform disturbances subsided and heart lesion fairly improved.



CASE 13. *Tonsillitis Follicularis Acuta.*—N. K. Female, 22 years. Houseworker. Had a number of previous tonsillar attacks. Present illness quite severe, with considerable subjective complaints. First injection intravenously, 15cc.; followed by great drop of temperature and marked reaction. Four additional injections given when attack entirely subsided.



CASE 14. *Typhoid fever, Pericarditis Rheumatica, Mitral Insuff. Pregnancy.*—A. C. Female, 18 years. Houseworker. Had two previous attacks of articular rheumatism with cardiac complications; was admitted on fifth day of illness with sore throat, fever, palpitation, shortness of breath, pain in the heart region, etc. Examination revealed a gravid uterus sixth month, congestion and swelling of faucial tonsils and pillars and enlargement of spleen. A fresh pericarditis easily identified by distinct superficial rubbing at the base of the heart was found in addition to an old lesion of the mitral valves. The temperature 38 to 39 degrees C., pulse 84. The patient was administered 50cc. of electrargol with 10 drops of tincture opium per rectum. (Patient refused intravenous injections.) The next injection was postponed for several days, because of an appearance of a rash and subjective symptoms. The rash was first ascribed to the injection, but soon identified with typhoid, a positive Widal and Ficker tests having substantiated the diagnosis. The electrargol injections were then continued (7 more at 30cc. rectally) until the fever subsided. Patient continued to improve, but had to be transferred for sanitary reasons to another institution. The injections have had no effect upon the pulse and movements of fetus in utero.



Notwithstanding the satisfactory results offered in most cases, we have experienced also a number of failures in the use of this method of treatment of acute endocardial disease. There were a few instances where the colloidal silver preparations have failed and where their substitution by drugs (pyramidon, aspirin, salipyrin, etc.) seemed to have benefited the patients very decidedly. In a number of other cases, on the other hand, the drugs previously mentioned, although primarily employed, failed completely whereas, the injection

tions of colloidal silver succeeded. The effect of the administration of the latter drug was not alike in all cases employed, some being benefited more than others, total failures, it is only fair to state, have occurred in the very severe, extremely complicated or profoundly septic cases of endocarditis. As an example, the two following cases will be cited:

CASE 15. *Rheumat. Acuta Articulorum Endocarditis Ulcerosa. Valv. Mitralis et Mortae. Septicemia. Exitus.*—A. R., 30 years. Dressmaker. Two months before present attack pain and swelling of the hands and knees. Since 14 days palpitation of the heart and sticking pain in the region of the latter. Had several attacks of chills, fever and sweats. The heart pre-systolic murmur at the apex and aorta valves. Second pulmonic not accentuated. Heart enlarged. Pulse soft, at times irregular. Petechial rash over extremities. Streptococcus isolated

2. They exercise a most favorable influence upon the severity and duration of the febrile temperature.

3. They ameliorate the subjective complaints of the patients very materially.

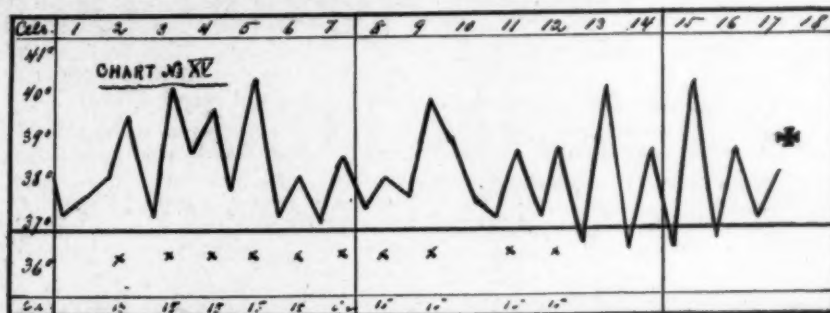
4. They diminish the duration, modify the course and reduce the severity of the individual case.

5. They are not harmful and do not effect the organism injuriously.

6. Their application is simple, their injection painless and devoid of unpleasant after effects or dangerous complications.

7. Their positive usefulness in a majority of cases warrants their trial in all cardiac cases.

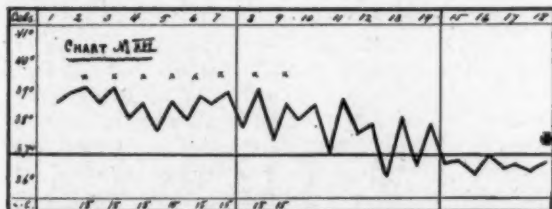
643 St. Mark's Avenue.



from the blood and tonsils. Anti-streptococcus serum injected 80cc. rectally. Unguentum Crede over precordium. Quinine 0.5 t. i. d. Electargol 10cc. once, 15cc. 8 times and 2½cc. into tonsils. No results. Death on the 17th day of disease. The autopsy showed the above mentioned lesions.

CASE 16. *Endocarditis Gonorrhoeica, Polyarthritidis, Nephritis, Retinitis albuminurica, Uremia, Exitus.*—E. L. Female, 20 years. Servant. Previous history not obtainable. Present illness since 10 days, edema of the face, conjunctivæ, swellings of both wrists, right knee and ankle. Heart enlarged and scraping sounds all over its surface. Later, murmur appeared, vomiting, sweats, cyanosis, small weak pulse, uremic convulsions. In this case injections were given intravenously 15cc. daily 8 times. Local treatment with potassium permanganate, argon injections; also urotropin, veronal, etc. Death occurred on the 18th day of admission.

Autopsy.—Small exudate in left pleural cavity. Right apex an old tubercular process. Hemorrhagic infarct in the right kidney. Endocarditis with insufficiency of mitral valve. Dilatation and mild hypertrophy of heart walls. Hyperemia of brain. Sinus thrombosis. Urethral discharge and tubes-gonococci positive.



The rest of the cases constituting the series of 78, in which colloidal metals have been employed for therapeutic purposes is of no particular interest here, as it is the object of this paper to relate the experiences in the use of colloid metal drugs only in cardiac disease and in its complications. That rest was composed of a number of pathological conditions of variable origin and character, accompanied by a greater or lesser degree of fever, and included such conditions as pneumonia, osteomyelitis, tuberculosis, sepsis, pyelitis, etc.

Conclusions:

1. Colloidal silver injections have a decidedly favorable effect upon acute endocardial and pericardial affections of the heart.

Lesions and Drugs Producing Them.

Hyperemia (*erythema*). Antipyrin, arsenic, belladonna (atropin), benzoate of soda, boric acid, borax, bromin, cantharides, capsicum, chinolin, chlorate of potash, chloral hydrate, chloral-amid, iodine, iodoform, lactophenin, mercury, phenacetin, quinin, salicylic acid, stramonium, strychnia, sulfonal, tar, terebene, toxins, turpentine.

Macule (*roseola*). Copaiba, quinin, sulfonal.

Papule. Antipyrin, chloral hydrate, chlorate of potash, cubebs, morphia, quinin, toxins.

Wheal (*urticaria*). Antipyrin, arsenic, bromin, copaiba, dulcamara, guarana, iodine (salts), quinin, resin, salicylate, santonin, toxins (and serums).

Vesicle. Antipyrin, arsenic (herpes), bromin, cannabis indica, chloral, cod liver oil, copaiba, iodine (salts), morphia, quinin, salicylic acids, sulfonal, turpentine.

Bulla. Antipyrin, bromin, cannabis indica, copaiba, chloral, iodine (salts), mercury, morphia, phosphoric acid, quinin, rhubarb, salicylates.

Pustules (*furuncles*). Arsenic, bromin, chloral, iodine (salts), salicylic acid.

Tubercle (*nodes*). Iodine salts.

Tumor. Warty growths from arsenic.

Scales. Arsenic (keratosis), borax, bichromate of potash, chlorate of potash, chrysarobin, copaiba, cubebs, iodoform, mercury, opium, quinin, rhubarb.

Crusts. Bromin, borax, iodoform, potassium bichromate, mercury (bichlorid).

Pigmentation. Arsenic, picric acid, silver nitrate.

Ulcers. Bromin and iodine salts (often vegetating ulcers). Gangrene may occur after arsenic, ergot, iodids and quinin.

Purpura. Antipyrin, arsenic, chloral hydrate, chloroform, ergot, iodids, quinin, salicylic acid, sulfonal.

Cyanosis. Antifebrin belladonna, exalgin, monobromacetanilid, phenyl hydroxylamin.

Treatment. The treatment must also depend upon the drug. Usually cessation stops the eruption. In profound cases, stimulation and antidotes are required pro re nata.—(*New Orleans Med. & Surg. Jour.*)

The Physician's Library

The Tonsils. By Harry A. Barnes, M. D., Instructor in Laryngology in Harvard Medical School. Cloth. 168 pages. Illustrated. \$3.00 net. St. Louis: C. V. Mosby Co., 1914.

Barnes concisely states facts concerning the lymphoid tissues of the throat and makes them the basis of the theories he has advanced. He pays especial attention to the tonsil as the means of entrance of pathogenic bacteria into the system. The book pays well-balanced attention to the anatomy, histology, function, pathology, bacteriology and diseases of the tonsil. The subject is well presented and good illustrations add to the value of the text.

Fever, Its Thermotaxis and Metabolism. By Isaac Ott, A.M., M.D., Professor of Physiology Medico Chirurgical College, Philadelphia; Member of American Physiological Society. Cloth. 166 pages. 14 illustrations. \$1.50 net. New York: Paul B. Hoeber.

The excellence of these lectures to students is the warrant for their preservation in book form. They cover the subject so thoroughly that every practitioner will delight in reading them. Ott's style is clear and his expression illuminating and he has portrayed this important subject instructively and attractively.

Obstetrics. By Henry G. Landis, M. D., Late Professor of Obstetrics in Starling Medical College and William H. Wells, M. D., Assistant Professor of Obstetrics in Jefferson Medical College. Cloth. 261 pages. Illustrated. \$1.00 net. Philadelphia: P. Blakeston's Son & Co., 1914.

This compend carries the student over the subject thoroughly. It not only touches the "high spots," but is very practical in its application. The revision by D. Wells has added to its value, as he has added new thoughts and revamped old ones.

Chemistry for Nurses. By Reuben Ottenberg, A. M., M. D., Lecturer to the Nurses' Training School, Mt. Sinai Hospital; Instructor in Bacteriology in Columbia University. Cloth. 141 pages. \$1.00 net. New York: The Macmillan Company, 1914.

The author has entered a virgin field with this book and to quote a time worn bromide, "It fills a long-felt want." The need for such a book has long been apparent and this manual covers the subject as thoroughly and succinctly as is needed. The nurse who comprehends thoroughly all the author has given will have a splendid working knowledge of her subject.

Students' Manual of Gynecology. By John Osborn Polak, M. Sc., M. D., F.A.C.S., Professor of Obstetrics and Gynecology, Long Island College Hospital; Professor of Obstetrics in the Dartmouth Medical School; Gynecologist to the Jewish Hospital; Consulting Gynecologist to the Bushwick, Coney Island, Deaconess' and Williamsburg Hospitals, Brooklyn, and the Peoples Hospital, New York. Cloth. 414 pages. Illustrated with 100 engravings and 9 colored plates. \$3.00 net. Philadelphia and New York: Lea & Febiger, 1915.

As is to be expected this book contains all the fundamentals of the subject. Everything is presented compactly, lucidly and in order. No essential is omitted. The distinguished author is as thorough in his literary labors as in his operative technic, and this important qualification has put him in the front rank of American obstetricians and gynecologists.

The book is devoted to gynecology alone, with no dipping into abdominal or obstetrical surgery. In it the pathology of the conditions discussed is fully covered and the diagnosis of each is made clear. Operative measures and medical treatment are considered in their entirety. In short the subject is amply presented. Unlike many books, this one is personal. It describes Polak's views and not those of other surgeons. From cover to cover it is distinctly Polakian.

The text matter is made more valuable by over 100 illustrations of a very high order, most of which were drawn under the direction of Dr. Polak by M. Stone, one of his senior students.

An Epitome of Pediatrics. By Henry Enos Tuley, M.D., Late Professor of Obstetrics in the University of Louisville; 2nd edition, revised and enlarged. Cloth, 324 pages, \$1.00 net. Philadelphia and New York: Lea & Febiger, 1914.

This little book contains the essentials of pediatrics, carefully condensed in systematic order. In addition to the facts in the previous edition, many additions have been made, including a new chapter on dermatology and new material along the lines of contagious diseases and infant feeding. The book is valuable to student and physician alike for review.

Nervous and Mental Diseases. By Joseph D. Nagel, M.D., Consulting Physician to the French Hospital of New York; 2nd edition, revised and enlarged. Cloth, 293 pages, with 50 engravings and a colored plate, \$1.00 net. (The Medical Epitome Series.) Philadelphia and New York: Lea & Febiger, 1914.

Much knowledge has been put into small space and Dr. Nagel is to be congratulated on his ability to cover his wide field with such discrimination. He has completely revised the first edition and added much of value. The study of this volume will enable one to speedily assimilate the working principles of neurology and psychiatry, and will lay the foundation for later and more comprehensive reading.

Therapeutics of the Circulation. By Sir Lauder Brunton, Bart., M.D., F.R.C.P. 2nd edition. Cloth, 536 pages, \$2.50 net. New York: Paul B. Hoeber, 1914.

The distinguished author gives a lucid description of diseases of the cardio-vascular system from a clinical standpoint. Passing by morbid anatomy and diagnosis he dwells especially on the pathology of living structures and on physiology and pharmacology. Brunton follows this idea, because he says that "a surgeon may only take a few minutes to perform an operation, but needs years to learn his anatomy so thoroughly that he can guide his knife swiftly and surely to a successful result. This has enabled the author to present a multum in parvo on this important subject and one which will prove a valuable assistant in treating circulatory disturbances.

The Care of the Sick Room. By Elbridge Gerry Cutler, M.D. Cloth, 58 pages. Cambridge, Mass.: Harvard University Press, 1914.

This is one of the Harvard health talks and is based on lectures at Harvard Medical School. It is admirably adapted for use in the homes of the sick and it is to be hoped the book will get a deservedly widespread distribution.

(Continued on p. 20.)



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(Continued from p. 142.)

Infant Feeding, Its Principles and Practice. By F. L. Wachenheim, M.D., Attending Physician Sydenham Hospital and Mount Sinai Dispensary, New York. Cloth, 340 pages, \$2.00 net. Philadelphia and New York: Lea & Febiger, 1915.

The author has successfully assimilated the very extensive literature of this subject and has presented in available form the ultimate conclusions of the world's leading authorities. This volume gives critical consideration to the various systems and formulas. Among the subjects considered are infant digestion, protein, carbo-hydrate, salt and fat metabolism, the bacteriology of milk; the constituent elements of cow's milk and the essential difference between it and human milk; milk regulation and the feeding of whole milk. He rejects the top milk method and recommends the Jacobi system of simple dilutions. The cause, symptomatology, diagnosis and treatment of digestive and metabolic disorders are considered at length.

Diseases of the Bronchi, Lungs and Pleura. By Frederick T. Lord, M.D., Instructor in Clinical Medicine, Harvard Medical School. Cloth, 605 pages. Illustrated with 93 engravings and 3 colored plates. \$5.00 net. Philadelphia and New York: Lea & Febiger, 1915.

Dr. Lord has studied the literature of the subjects considered and has co-ordinated the knowledge thus assembled with the results of his personal observations and investigations in the Massachusetts General Hospital. A complete and very useful volume is the result. The use of the bronchoscope is fully considered and the importance of x-ray examinations is not overlooked. The chapters dealing with the recognition of different types of pneumococci as a cause of lobar pneumonia; the results of animal experiments with the pneumococcus; metabolism in pneumonia; immunity; preventive inoculation; special methods of treatment, particularly by immune sera; the causes of hemoptysis and its recognition as a manifestation of tuberculosis, are full and logical. Artificial pneumothorax in the treatment of pulmonary conditions, is well covered. The volume is highly enlightening.

Obstetrical Nursing. By Charles S. Bacon, Ph. B., M. D., Professor of Obstetrics, University of Illinois and the Chicago Polyclinic; Medical Director, Chicago Lying-In Hospital; Attending Obstetrician, University, Chicago, Polyclinic, Hernotin, German and Deaconess Hospitals. Cloth, 355 pages, illustrated with 123 engravings. \$2.00 net. Philadelphia and New York: Lea & Febiger, 1915.

This book is very complete in covering its field. The anatomical structure and functions of the pelvis, the genital and adjacent organs of woman, the development of the fetus and the relations of the child to its mother are clearly set forth. The physiological and pathological changes of pregnancy; the nursing technic before, during and after labor and of obstetrical operations; lactation; the care of the patients in both ordinary cases of in the rarer forms of puerperal disturbance, are given detailed consideration. The chapters devoted to the early care of infants, infant feeding, and to diet, embody the latest ideas on the subject. The book is valuable to nurse, student and physician.

Manual of Biological Therapeutics. Cloth. 175 pages. Illustrated. Detroit: Parke, Davis & Co., 1914.

This manual is a concise and practical treatise on biological therapeutics, replete with useful information. Among the subjects treated: Immunity; The Preparation and Uses of Sera; Antidiphtheric Serum; Concentrated Diphtheria Antitoxin; Antitetanic Serum and Globulins; Antigonococcal, and Antimeningitic Sera; Bacterial Vaccines or Bacterins; The Opsonic Index; Bacterins and Their Indications; The Diagnosis of Typhoid Fever; The Agglutination Test Without a Microscope; Gonococcus Antigen; The Wassermann Reaction; Coley's Mixture; Coagulose or Hemostatic Ferment; *Bacillus Lactis Bulgaricus*; Phylacogens, Their Preparation and Mode of Use; Tuberculin; Organotherapy; The Biological Farm and the Research Laboratory. This manual will be sent to readers of THE MEDICAL TIMES by Parke, Davis & Co., and it is worthy a place in every man's library.

Meeting of New York State Society.

The Medical Society of the State of New York will hold its hundred and ninth annual meeting in Buffalo, April 27-29. On account of the European war, this will probably be the largest medical meeting of the year, except perhaps that of the A. M. A. in San Francisco. The meeting will be held in the Sixty-fifth Regiment Armory, one of the largest in the country, and will afford accommodations for all activities of the meeting, except the annual banquet. A restaurant will be conducted in the building, there will be ample space for commercial and scientific exhibits, and an abundance of halls for general and section meetings. Even an automobile park will be provided on the armory grounds.

The choice of the armory is fortunate in another sense, as indicating the organization of the State Society as an arm of the State government. On the last night of the meeting a regimental parade and review by General Gorgas will be held.

Deaths Caused by Automobiles and Horses.

That the automobile, in spite of the rapidity with which it has come into general use, is still less deadly than the horse, might be inferred from the fact that the mortality incident to its operation was less in 1913 than that chargeable, directly and indirectly, to man's faithful but sometimes erratic friend. During the year the number of deaths resulting from automobile accidents and injuries was 2,488, while the number due to injuries and accidents caused by other vehicles (principally horse drawn) was 2,381, and the number caused by animals (principally horses), was 540. The corresponding figures for 1912 were 1,758, 2,221, and 543. A few fatalities caused by motorcycles and bicycles are included in those due to "other vehicles," and a small number chargeable to animals other than horses are comprised by those caused by animals; but, after making due allowance for these factors, there still remains a considerable "margin of safety" in favor of the automobile. Deaths due to railway accidents and injuries during the year numbered 8,212, and those resulting from street car accidents and injuries, 1,998. The corresponding figures for 1912 were 8,209 and 1,832. For the first time the number of fatalities due to automobile accidents and injuries exceeds the number resulting from injuries caused by other vehicles and also exceeds the number due to street car accidents.

Calculi embedded in the cortical portion of the kidney may exist for years and give rise to no symptoms.